PART A

IONOSPHERIC DATA

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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTRAL RADIO PROPAGATION LABORATORY
BOULDER, COLORADO

CRPL-F195
PART A

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CONTENTS

SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, and continuing through December 1956, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1957, the symbols used are given in NBS Report 5033, "Summary of Changes in Ionospheric Vertical Soundings, Observing and Scaling Procedures - Effective 1 January 1957," which draws upon the First Report of the Special Committee on World-Wide Ionospheric Soundings (URSI/AGI), Brussels, Sept. 2, 1956. A list of these symbols is available upon request.

In the Second Report of the Special Committee on World-Wide Ionospheric Soundings of the URSI/AGI Committee, May 1957, a new descriptive letter was introduced:

M Measurement questionable because the ordinary and extraordinary components are not distinguishable.

There was an expansion in meaning of the following:

Z (1) (qualifying letter) Measurement deduced from the third magnetoionic component.
(2) (descriptive letter) Third magnetoionic component present.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given above.

a. For all ionospheric characteristics:

Values missing because of A, C, F, H, L, N or R are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of foF2 (and foE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of h'F (and h'E near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For foF2, as equal to or less than foF1.
2. For h'F2, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the descriptive symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

B for fEs is counted on the low side when there is a numerical value of a higher layer characteristic; otherwise it is omitted from the median count.

S for fEs is counted on the low side at night; during the day it is omitted from the median count (beginning with data for November 1957).

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with CRPL-F188, Part A, issued April 1960, the count is given for foF2 in the tables of medians. It is regretted that space limitations prevent including detailed counts for other characteristics.

To indicate further in a general manner the relative reliability of the data, for the F2 layer, h'F or foEs, if the count is from five to nine, or, for all layers, if more than half of the data used to compute the medians are doubtful (either doubtful or interpolated), the median is enclosed in parentheses. Medians are computed for less than five values for foF2 only.

Ordinarily, a blank space in the fEs or foEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of foE. Blank spaces at the beginning and end of columns of h'F2 or h'F1, foF1, h'E, and foE are usually the result of diurnal variation in these characteristics. Complete absence of medians of h'F1 and foF1 is usually the result of seasonal effects.

There is no indication on the graphs of the relative reliability of the observed data; it is necessary to consult the tables for such information.

The tables may contain median values of either foEs or fEs. The graph of median Es corresponds to the table. Percentage curves of fEs are estimated from values of foEs when necessary.

The latest available information follows concerning the smoothed observed Zürich numbers beginning with the minimum of April 1954. Final numbers are listed through June 1959.

Smoothed Observed Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	73	81
1956	89	98	109	119	127	137	146	150	151	156	160	164
1957	170	172	174	181	186	188	191	194	197	200	201	200
1958	199	201	201	197	191	187	185	185	184	182	181	180
1959	179	177	174	169	165	161	156	151	145	140	136	132
1960	128	124	120	118								

WORLD-WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 72 and figures 1 to 144 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:
Buenos Aires, Argentina
Decepcion I.

Commonwealth of Australia, Ionospheric Prediction Service of the Commonwealth Observatory:
Canberra, Australia

Meteorological Service of the Belgian Congo and Ruanda-Urundi:
Bunia, Belgian Congo
Elisabethville, Belgian Congo
Leopoldville, Belgian Congo

Belgian Royal Meteorological Institute:
Dourbes, Belgium

Escola Politecnica, University of Sao Paulo:
Sao Paulo, Brazil

British Department of Scientific and Industrial Research, Radio Research Board:
Falkland Is.
Inverness, Scotland
Port Lockroy
Singapore, British Malaya
Slough, England

Defence Research Board, Canada:
Churchill, Canada
Eureka, Canada
Frobisher, Canada
Ottawa, Canada
Resolute Bay, Canada
St. John's, Newfoundland
Winnipeg, Canada

Radio Wave Research Laboratories, National Taiwan University, Taipeh, Formosa, China:
Formosa, China

General Direction of Posts and Telegraphs, Helsinki, Finland:
Nurmijarvi, Finland

The Finnish Academy of Sciences and Letters:
Sodankyla, Finland

French National Center for Telecommunications Studies:
Dakar, French West Africa
Djibouti, French Somaliland
Poitiers, France
Rabat, Morocco
Tahiti, Society Is.
Tamanrasset, French West Africa
Tananarive, Madagascar

Heinrich Hertz Institute, German Academy of Sciences, Berlin:
Juliusruh/Rügen, Germany

Institute for Ionospheric Research, Lindau Uber Northeim, Hannover, Germany:
Lindau/Harz, Germany
Tsumeb, South West Africa

Ionospheric Institute, Breisach, Germany:
Freiburg, Germany

The Royal Netherlands Meteorological Institute:
De Bilt, Holland
Paramaribo, Surinam

Geophysical and Geodetic Institute, Genoa, Italy:
Genoa (Monte Capellino), Italy

Ministry of Postal Services, Radio Research Laboratories, Tokyo, Japan:
Akita, Japan
Tokyo (Kokubunji), Japan
Wakkanai, Japan
Yamagawa, Japan

General Directorate of Telecommunications, Mexico:
El Cerillo, Mexico

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
Tromso, Norway

Telecommunication Administration, Oslo, Norway:
Svalbard, Norway

Research Institute of National Defence, Stockholm, Sweden:
Kiruna, Sweden
Lycksele, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm, Sweden:
Lulea, Sweden

Post, Telephone and Telegraph Administration, Berne, Switzerland:
Sottens, Switzerland

United States Army Signal Corps:
Adak, Alaska
Ft. Monmouth, New Jersey

National Bureau of Standards (Central Radio Propagation Laboratory):
Anchorage, Alaska
Huancayo, Peru (Instituto Geofisico de Huancayo)
Maui, Hawaii
Point Barrow, Alaska
Pole Station, Antarctica
Talara, Peru (Instituto Geofisico de Huancayo)

TABULATIONS OF ELECTRON DENSITY DATA

Reduction of hourly ionospheric vertical soundings to electron density profiles has become a part of the systematic ionospheric data program of the Central Radio Propagation Laboratory, National Bureau of Standards. Scalings of ionograms for this purpose are being provided by ionosphere stations operated by CRPL and the U. S. Army Signal Corps. For the present, the hourly profile data from one CRPL station, Puerto Rico, are appearing in the monthly CRPL-F Reports, Part A. These data are in place of the standard ionogram reductions formerly provided by this Station. The very considerable task of scaling the ionograms for this purpose is being undertaken by T. R. Gilliland, Engineer in Charge, Puerto Rico Ionosphere Sounding Station; the computations are performed at the NBS Boulder Laboratories by a group headed by J. W. Wright. Basic conversion of virtual to true heights uses the well-known matrix method developed by K. G. Budden of the Cavendish Laboratory, Cambridge University, programmed for an IBM 704 computer.

The tabulations provide the following basic electron density profile data for each hour of each day of the month:

Quantity	Units	Remarks
Electron Density (N)	$x10^3$ = electrons/cm^3	Body of table; given at each 10 km of height.
NMAX	$x10^3$ = electrons/cm^3	Always the highest value of N at each hour. To maintain this rule, the electron density at the next 10 km increment above HMAX is always given as exactly equal to NMAX (unless HMAX coincides with a 10 km level).
QUALification	(Alphabetic)	A standard scaling letter qualifying the observation when necessary.
HMIN	Kilometers	The height of zero or very low electron density, obtained by linear extrapolation of the electron density vs. height curve.
SCAT	Kilometers	One half of the half-thickness of the parabola best fitting the upper portion of the F region profile. Approximates the scale height near the level HMAX.
HMAX	Kilometers	The height of maximum electron density, determined by fitting a parabola to the upper portion of the profile.
SHMAX	$x10^{10}$ = electrons/cm^2 column.	Obtained by integration of the profile between the limits HMIN and HMAX.

Tabulations of the average electron densities each hour, at each 10 km level, for the quiet ionosphere, are also given. These averages include the profiles obtained when the magnetic character figure Kp is less than 4+. The number of profiles entering the average for each hour is given by CNT. The other parameters of the layer, HMIN, SCAT, HMAX, SHMAX, are averaged in a similar way.

Before the averaging process, the individual profiles are extrapolated above HMAX by a Chapman distribution of 100 km scale height. This assumed model seems to agree well with the few published measurements dealing with the topside profile of the F-region.* Extrapolation is necessary in order to calculate homogeneous averages near HMAX and the average profiles are, in fact, given up to 950 km. Also given are the average estimated integrated electron densities to infinity, SHINF (same units as SHMAX); this is an approximation to the total electron content in a column of the ionosphere.

*See Wright,J.W. "A Model of the F-Region Above HMAX F2" J.Geophys.Res. V.65 pp 185-191.

ELECTRON DENSITY

PUERTO RICO 60 W 1 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	260	263	228	221	257	263	211	110	110	109	109	108
SCAT	60.1	66.6	56.7	69.8	69.1	59.8	70.7	56.1	62.9	60.9	108	86.1
HMAXF	404	411	371	334	418	412	388	342	320	286	338	308
SHMAX	606	683	539	517	444	434	479	605	719	619	842	827
KM												
420		735			461	516						
410	735	735			460	516						
400	734	731			459	511						
390	725	718			441	496	469					
380	703	694	670		424	478	467					
370	673	666	670		404	452	461					
360	635	629	664		378	419	450					
350	587	583	648		347	377	433	540				
340	524	533	618	661	310	329	414	540			500	
330	452	477	582	660	271	274	389	534	643		499	
320	371	417	537	654	227	216	362	519	643		497	
310	286	348	483	641	182	163	328	494	639		492	599
300	198	273	417	624	140	117	292	462	626		485	598
290	124	192	341	605	105	80.5	254	422	606	557	475	592
280	76.9	112	262	566	74.4	54.8	219	379	578	555	460	583
270	46.6	49.6	191	508	47.9	31.0	176	337	543	547	446	568
260			127	423	12.4		139	302	494	530	429	550
250			81.9	310			104	272	430	510	413	529
240			49.6	161			74.9	247	381	477	395	504
230			12.4	67.1			54.3	226	331	440	381	475
220							34.5	209	294	399	368	440
210								194	272	362	357	405
200								179	256	333	349	376
190								162	242	310	341	354
180								143	223	294	330	335
170								122	200	276	312	323
160								101	176	254	288	311
150								85.8	154	227	261	297
140								80.7	136	198	233	278
130								77.0	123	178	205	238
120								73.3	115	167	187	208
110								40.2	40.2	127	127	143

ELECTRON DENSITY

PUERTO RICO 60 W 1 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			A	A	A	A	A	A	A	A	A	A
HMIN	109	109						198		248	247	248
SCAT	63.3	82.7						57.5		59.8	4507	62.5
HMAXF	314	343						356		393	403	403
SHMAX	846	1072						783		712	634	949
KM												
410											824	1096
400										854	823	1095
390										854	806	1084
380										843	764	1058
370										818	709	1016
360								906		784	646	960
350		726						904		739	573	897
340		726						890		685	503	820
330		722						858		619	428	732
320	643	711						815		540	354	626
310	642	696						764		446	286	508
300	635	680						700		353	212	362
290	620	656						631		250	148	240
280	595	624						555		155	103	149
270	561	583						477		97.2	7104	90.0
260	524	540						389		55.3	4702	53.1
250	487	497						298		12.4	1204	12.4
240	454	459						211				
230	425	428						137				
220	403	402						83.8				
210	385	383						52.8				
200	374	367						12.4				
190	363	355										
180	350	346										
170	336	336										
160	315	318										
150	294	292										
140	268	260										
130	232	236										
120	207	220										
110	71.4	71.4										

ELECTRON DENSITY

PUERTO RICO 60 W 2 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A				A	A		A	A	A	A	A
HMIN	227	205	208	243	267		248					
SCAT	54.6	49.3	60.8	88.4	72.4		64.4					
HMAXF	354	322	358	421	402		376					
SHMAX	671	543	529	666	497		523					
KM												
430				573								
420				573								
410				571	548							
400				566	548							
390				556	544							
380				543	533		643					
370				524	518		641					
360	939		634	504	500		632					
350	937		631	480	477		616					
340	922		621	453	446		590					
330	890	834	600	423	406		558					
320	847	833	575	385	355		519					
310	781	821	540	343	294		467					
300	686	790	489	294	227		400					
290	573	746	425	244	156		310					
280	446	679	357	192	80.7		206					
270	310	586	286	136	31.0		116					
260	186	467	219	80.0			60.0					
250	108	326	154	43.1			12.4					
240	60.0	198	104									
230	19.3	115	69.4									
220		67.8	45.8									
210		32.2	7.7									

ELECTRON DENSITY

PUERTO RICO 60 W 2 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	S		A	A	A	B	A	A	A	A
HMIN	109	108		109				249	209	207	263	236
SCAT	100	101		102				55.7	59.0	61.3	6700	58.8
HMAXF	422	410		380				358	358	389	422	402
SHMAX	1861	1768		1594				718	691	728	631	554
KM												
430	1038										697	
420	1038	1016									697	
410	1035	1016									692	643
400	1028	1013									679	643
390	1016	1006		1038						784	656	636
380	998	988		1038						779	629	619
370	975	969		1035						765	593	593
360	947	947		1028				1027	814	738	546	559
350	920	921		1015				1022	810	704	485	515
340	888	891		995				1000	796	658	417	458
330	852	860		971				960	765	605	343	396
320	812	826		945				907	729	540	270	332
310	770	786		917				839	679	477	198	267
300	723	740		875				744	623	404	135	207
290	672	680		824				615	556	335	9003	157
280	615	635		763				446	484	272	5808	117
270	555	581		693				251	402	211	32.2	86.1
260	499	528		617				97.3	316	161		62.6
250	446	481		535				12.4	234	118		45.4
240	408	441		469					151	86.0		16.1
230	377	408		417					88.8	61.7		
220	356	382		383					52.0	44.2		
210	340	363		359					6.3	12.4		
200	332	353		346								
190	327	345		333								
180	322	336		314								
170	317	329		293								
160	312	309		271								
150	291	288		253								
140	259	256		237								
130	219	225		219								
120	191	208		191								
110	112	161		112								

ELECTRON DENSITY

PUERTO RICO 60 W 3 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A	A	A		A	A	A	A	A	
HMIN	282	197	214	235	200	228	207	110		110		109
SCAT	58.1	56.0	68.8	58.1	73.0	49.0	44.1	63.6		75.5		82.5
HMAXF	413	358	382	373	365	346	325	288		328		365
SHMAX	510	606	594	501	515	288	255	581		996		1520
KM												
420	661											
410	660											
400	653											
390	634		625									
380	611		625	625								
370	573		620	625	516							1050
360	521	754	609	617	515							1048
350	458	750	588	600	510	417						1040
340	379	734	563	576	497	416						1025
330	293	704	535	540	482	407	389			784		1001
320	198	665	498	496	462	389	388			782		969
310	127	613	456	440	439	362	378			773		930
300	76.0	540	403	370	412	326	357			757		884
290	43.9	452	344	301	378	283	328	608		733		834
280		362	286	231	338	233	286	605		706		777
270		286	219	161	295	179	240	596		670		716
260		214	151	101	249	121	195	579		625		654
250		161	100	60.0	196	77.2	143	554		576		591
240		118	70.2	30.7	143	49.6	101	525		525		530
230		86.3	49.6		97.2	12.4	70.0	483		473		477
220		61.9	24.3		64.9		47.0	429		428		439
210		44.4			41.9		12.4	367		389		409
200		12.4						305		359		386
190								249		334		370
180								203		310		356
170								167		286		342
160								141		251		323
150								121		215		295
140								106		188		262
130								94.2		162		229
120								85.8		150		204
110								49.6		49.6		83.8

ELECTRON DENSITY

PUERTO RICO 60 W 3 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	A	A	A		A	A	A	A	A	
HMIN	111		108	109		110			256		260	258
SCAT	69.2		82.8	86.2		71.1			60.3		60.9	54.9
HMAXF	337		376	384		368			389		409	406
SHMAX	1458		1746	1801		1719			1169		1352	1282
KM												
410											1654	1640
400											1644	1635
390				1252					1446		1612	1604
380			1240	1252					1439		1555	1545
370			1238	1245		1500			1412		1480	1457
360			1229	1222		1495			1365		1386	1341
350			1210	1195		1475			1294		1261	1211
340	1228		1182	1168		1439			1209		1096	1050
330	1225		1145	1139		1386			1105		917	884
320	1210		1100	1086		1329			960		700	704
310	1182		1045	1021		1245			806		477	508
300	1143		977	949		1153			643		310	310
290	1090		898	870		1037			458		173	185
280	1021		813	784		907			296		97.2	107
270	940		729	698		772			143		52.6	60.0
260	849		648	619		643			45.6			12.4
250	754		573	553		535						
240	651		508	496		446						
230	561		454	450		384						
220	489		415	415		338						
210	439		386	389		306						
200	406		365	368		281						
190	379		350	350		259						
180	357		336	333		237						
170	339		324	310		214						
160	318		312	286		192						
150	292		293	264		173						
140	262		262	237		143						
130	229		231	210		125						
120	204		210	190		117						
110			179	143		49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 4 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A						S	A	A	A	A
HMIN	249	227	200	202	238	219	217	109				
SCAT	52.0	45.4	58.9	47.8	56.3	68.6	54.4	81.0				
HMAXF	373	337	294	354	361	384	343	326				
SHMAX	1247	1201	834	621	561	640	514	745				
KM												
390						679						
380	1815					678						
370	1814				754	672						
360	1786			794	754	658						
350	1713			783	748	637	716					
340	1625	1969		760	729	609	716					
330	1500	1957		728	697	573	706	608				
320	1341	1899		687	657	531	683	607				
310	1121	1793		638	600	477	651	601				
300	851	1643	1290	577	522	412	608	592				
290	540	1446	1288	508	429	344	540	577				
280	286	1191	1271	429	335	280	453	556				
270	143	875	1234	348	240	219	349	532				
260	68.9	508	1182	272	136	155	240	504				
250	12.4	240	1122	198	66.8	105	150	473				
240		103	986	137	12.4	69.6	94.7	438				
230		40.3	754	91.6		45.0	57.0	398				
220			446	60.0		2.5	18.3	354				
210			143	37.2				310				
200								268				
190								228				
180								193				
170								164				
160								140				
150								120				
140								103				
130								92.6				
120								85.5				
110								60.0				

ELECTRON DENSITY

PUERTO RICO 60 W 4 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		A				S	A	A			
HMIN		108	106	107	109			226		256	247	239
SCAT		66.4	72.3	72.7	70.0			88.9		49.5	55.0	48.2
HMAXF		365	351	352	346			398		394	399	382
SHMAX		1384	1444	1459	1405			753		666	755	664
KM												
400								670		917	960	
390								669		916	953	928
380								663		900	931	927
370		1027						654		863	889	912
360		1025	1096	1155				640		808	834	877
350		1014	1096	1155	1215			622		739	766	824
340		988	1089	1147	1213			601		651	679	754
330		954	1072	1126	1200			581		549	573	668
320		908	1043	1102	1174			549		446	477	563
310		851	1004	1062	1135			508		335	362	446
300		787	955	1009	1087			453		240	256	335
290		716	899	939	1023			392		155	169	240
280		646	834	858	935			327		97.2	115	161
270		579	765	770	834			262		60.0	75.3	106
260		522	694	679	725			194		24.1	49.6	69.7
250		477	624	589	616			132			12.4	44.7
240		440	556	518	515			74.9				2.8
230		413	497	462	440			28.2				
220		392	446	422	389							
210		379	412	394	356							
200		368	385	374	333							
190		357	367	356	319							
180		345	350	335	303							
170		332	332	316	286							
160		311	312	298	258							
150		277	286	279	230							
140		238	255	252	183							
130		217	226	217	159							
120		205	209	192	151							
110		143	179	161	127							

ELECTRON DENSITY

PUERTO RICO 60 W 5 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL	S											
HMIN	237	239	213	230	254	240	196	109	111	105	105	109
SCAT	44.2	56.0	60.6	70.3	55.1	65.2	71.4	85.7	77.9	90.6	82.4	87.5
HMAXF	379	364	329	383	368	382	385	361	337	338	369	394
SHMAX	576	661	521	539	388	362	468	1029	1483	1551	1834	2123
KM												
400												1420
390					590		410	439				1419
380	834				590		410	438				1411
370	826	906			585	548	406	434	754			1316 1393
360	797	905			574	546	398	425	754			1312 1366
350	742	893			558	532	384	411	751			1298 1326
340	679	865			541	514	368	393	743	1341	1191	1275 1275
330	593	827	679	511	486	345	372	730	1339	1188	1240	1220
320	508	769	675	469	446	317	346	710	1326	1178	1194	1161
310	409	688	662	417	382	282	317	684	1302	1161	1143	1096
300	310	586	639	352	305	240	286	655	1267	1136	1083	1013
290	219	469	608	286	230	198	255	623	1219	1104	1015	931
280	152	335	566	219	161	152	221	588	1165	1064	938	851
270	105	206	514	161	89.6	112	187	551	1096	1019	860	776
260	71.4	112	446	108	45.4	71.4	156	513	1010	968	781	705
250	47.7	60.0	353	71.4		45.8	127	473	897	910	702	638
240	12.4	4.5	254	45.8			102	431	763	846	628	576
230			143				77.8	389	616	769	563	525
220			60.0				57.9	347	493	679	508	483
210							42.4	305	379	552	467	450
200							12.4	262	316	446	433	420
190								222	272	374	403	389
180								184	235	325	372	362
170								152	203	288	335	332
160								127	174	255	298	301
150								108	148	219	258	265
140								96.0	131	187	217	219
130								90.0	122	163	185	194
120								83.8	115	152	172	184
110								12.4		134	161	143

ELECTRON DENSITY

PUERTO RICO 60 W 5 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL		A	S	S	S	A			R			
HMIN	108	109		108	107	111	110	229	228	223	257	289
SCAT	65.7	71.4		62.3	52.1	71.9	64.5	82.0	55.0	56.6	64.7	59.8
HMAXF	364	359		329	316	344	360	381	377	356	411	428
SHMAX	1964	2066		1817	1550	1321	1158	988	923	916	1029	978
KM												
430												1191
420											1191	1185
410											1191	1163
400										1050	1182	1123
390								1143		1046	1159	1067
380								1143	1167	1028	1119	998
370	1612						1038	1133	1162	990	1069	912
360	1605	1697					1038	1109	1138	937	1004	807
350	1579	1690				1119	1032	1068	1090	875	917	679
340	1531	1665				1118	1014	1016	1035	799	803	540
330	1471	1612		1771		1108	979	947	954	716	672	405
320	1393	1560		1762	1727	1084	936	863	853	628	540	272
310	1291	1487		1731	1721	1052	883	771	744	535	417	161
300	1188	1402		1676	1687	1008	819	667	625	435	286	71.4
290	1080	1297		1593	1616	960	743	548	500	335	179	12.4
280	960	1178		1496	1526	901	660	417	362	245	112	
270	826	1050		1375	1395	834	579	286	240	175	62.9	
260	716	932		1240	1229	762	501	174	148	122	19.6	
250	619	808		1061	1050	685	430	97.2	91.6	83.8		
240	540	697		887	853	608	370	54.8	54.8	56.0		
230	490	608		716	679	535	322	5.5	12.4	30.5		
220	456	531		582	540	462	286					
210	435	477		487	446	389	256					
200	419	431		423	396	330	230					
190	398	396		383	359	282	206					
180	373	370		356	335	244	179					
170	348	345		335	312	212	153					
160	320	316		310	288	177	129					
150	286	286		288	253	147	109					
140	229	254		262	210	130	93.4					
130	198	225		227	197	121	81.9					
120	188	207		206	186	114	75.3					
110	166	127		143	127		12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 6 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL									A	A	A	A
HMIN	269	214	188	230	276	251	227	108	110	109	109	
SCAT	58.5	48.0	60.7	43.1	64.9	41.3	70.1	71.7	66.2	75.5	63.9	
HMAXF	385	313	329	334	407	359	390	317	333	327	327	
SHMAX	916	667	455	251	311	223	357	774	1288	1694	1599	
KM												
410					362							
400					361		362					
390	1252				356		362					
380	1250				346		360					
370	1226				332		354					
360	1183				316	362	345					
350	1139				295	357	331					
340	1066			414	266	342	314		1228			
330	960		540	414	231	314	294		1227	1528	1487	
320	818	1107	537	404	191	278	270	707	1216	1525	1483	
310	643	1106	527	382	150	235	242	705	1190	1509	1461	
300	477	1083	508	350	112	188	211	697	1151	1480	1417	
290	262	1039	483	310	71.4	143	179	681	1096	1435	1366	
280	97.2	975	453	254	26.8	103	147	657	1030	1374	1297	
270	12.4	881	410	191		68.1	117	630	943	1304	1200	
260		739	358	127		44.1	89.9	595	840	1220	1081	
250		552	299	78.8			64.3	549	724	1132	960	
240		310	240	46.8			44.9	493	608	1018	826	
230		143	186				12.4	430	508	875	704	
220		49.6	146					370	425	731	608	
210			103					313	362	581	531	
200			62.6					268	310	458	477	
190			12.4					230	271	379	429	
180								198	237	326	383	
170								171	209	283	335	
160								145	184	247	289	
150								121	161	216	245	
140								102	136	186	206	
130								92.9	123	161	181	
120								86.8	115	150	169	
110								63.3	49.6	112	112	

ELECTRON DENSITY

PUERTO RICO 60 W 6 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL							A	A	A			
HMIN	109	109		110	111	110		187	228	269	279	258
SCAT	69.1	65.0		67.2	61.3	62.8		56.2	50.9	58.0	44.7	50.6
HMAXF	345	365		358	340	329		366	379	405	390	374
SHMAX	1736	1830		2131	1947	1550		956	892	1014	755	856
KM												
410										1265		
400										1263	1215	
390										1244	1215	
380									1167	1196	1201	1240
370		1446						1061	1158	1145	1157	1238
360		1444		1907				1058	1124	1073	1082	1215
350	1460	1424		1900	1969			1034	1082	987	974	1168
340	1458	139		1873	1963			996	995	875	834	1096
330	1441	1354		1824	1956	1612		947	896	754	679	1004
320	1393	1291		1752	1916	1610		888	787	608	477	883
310	1357	1217		1662	1842	1593		817	667	446	310	734
300	1291	1126		1556	1755	1556		739	540	294	179	560
290	1227	1038		1416	1635	1493		654	396	175	83.8	389
280	1143	942		1255	1494	1421		566	275	83.8	12.4	240
270	1035	846		1096	1324	1325		477	186	12.4		104
260	917	754		917	1143	1206		381	120			25.6
250	804	665		754	917	1075		291	77.9			
240	696	590		624	716	907		212	49.6			
230	608	529		528	573	730		153	12.4			
220	545	481		465	467	573		109				
210	495	445		423	400	429		74.2				
200	455	420		393	358	335		48.4				
190	420	401		372	328	281		12.4				
180	38	374		352	305	248						
170	35	335		331	282	219						
160	327	270		303	252	196						
150	284	240		267	224	170						
140	256	221		235	200	143						
130	229	210		206	188	125						
120	200	201		185	169	117						
110	97.2	143		83.8		49.6						

ELECTRON DENSITY

PUERTO RICO 60 W 7 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL											A	
HMIN	234	253	215	203	230	190	249	107	108	109	110	113
SCAT	62.0	51.0	45.8	52.3	36.5	66.5	61.4	70.6	79.3	71.4	89.5	69.1
HMAXF	377	369	313	327	318	317	358	312	343	335	366	365
SHMAX	963	836	709	553	358	430	346	704	1248	1557	1929	1891
KM												
380	1191											
370	1187	1253									1354	1555
360	1169	1244					446				1352	1554
350	1135	1200					444		1004		1343	1538
340	1090	1151					436		1004	1380	1313	1506
330	1022	1073			774		422		998	1379	1280	1457
320	930	960	1215	770	707	508	402	643	984	1366	1247	1386
310	812	803	1214	754	698	507	378	643	962	1339	1204	1302
300	679	621	1190	722	661	500	346	638	930	1292	1158	1205
290	540	436	1136	679	600	487	305	627	893	1245	1107	1105
280	389	253	1057	617	516	468	253	610	847	1178	1045	994
270	240	119	930	540	404	446	191	585	794	1096	976	883
260	132	49.6	754	446	270	417	112	555	725	998	906	777
250	75.7		540	345	143	378	12.4	519	653	887	838	679
240	40.		310	240	60.0	329		477	580	771	767	595
230			135	148		269		427	508	658	693	530
220			49.6	83.8		198		377	446	554	617	480
210				43.4		127		329	389	469	540	443
200						60.0		283	346	405	467	412
190								240	310	362	407	382
180								198	275	327	362	349
170								167	240	292	324	310
160								137	203	252	290	271
150								114	172	212	257	233
140								99.4	146	179	226	206
130								84.6	129	159	179	190
120								77.9	118	149	167	168
110								71.4	83.8	97.2	97.2	

ELECTRON DENSITY

PUERTO RICO 60 W 7 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL						A	A					A
HMIN	109	110	109	110	109	109		240	238	198	278	247
SCAT	66.4	69.4	66.9	57.7	61.7	58.3		62.4	42.8	59.0	62.6	59.1
HMAXF	348	369	359	347	340	349		368	342	369	418	398
SHMAX	1928	2240	2219	1959	1754	1658		1368	957	1091	1115	1113
KM												
420											1328	
410											1322	
400											1300	1393
390											1260	1387
380											1201	1361
370		1861						1640		1215	1134	1308
360		1853	1907					1632		1209	1039	1246
350	1669	1826	1898	1937	1683	1583		1604	1654	1185	925	1164
340	1663	1778	1869	1931	1683	1573		1555	1653	1143	794	1050
330	1639	1707	1818	1893	1672	1534		1476	1621	1082	663	904
320	1596	1623	1742	1822	1640	1476		1385	1541	1004	477	735
310	1529	1522	1652	1735	1585	1398		1277	1419	923	324	573
300	1446	1401	1536	1619	1503	1296		1150	1252	834	179	389
290	1341	1265	1405	1477	1406	1173		1004	1032	731	81.0	249
280	1240	1117	1266	1320	1286	1050		821	716	617	23.0	156
270	1117	977	1123	1129	1143	910		608	446	508		97.2
260	994	849	979	960	1004	783		389	219	408		58.0
250	868	731	844	807	853	671		179	91.7	310		18.7
240	748	629	716	669	716	579		12.4	25.6	213		
230	643	549	621	561	589	508				137		
220	556	491	545	477	489	442				86.1		
210	489	446	487	423	417	391				52.8		
200	437	417	440	382	371	349				12.4		
190	396	390	402	352	335	313						
180	366	366	368	325	310	282						
170	343	343	338	300	289	254						
160	324	320	310	273	265	226						
150	306	294	289	234	238	198						
140	274	266	269	194	207	170						
130	229	231	238	176	183	146						
120	204	206	213	156	168	134						
110	97.2	49.6	127	49.6	83.8	97.2						

ELECTRON DENSITY

PUERTO RICO 60 W 8 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A		A	A	A		A	A	A	A	A	A
HMIN	253	219	210	188	228	228	217			108		108
SCAT	48.7	52.3	51.2	55.9	55.0	70.3	66.7			79.5		74.0
HMAXF	366	333	301	316	350	376	368			315		367
SHMAX	900	983	724	522	404	441	442			1194		1887
KM												
380						469						1265
370	1406					468	500					1460
360	1400				540	463	498					1456
350	1367				540	453	491					1435
340	1292	1446			536	437	478					1395
330	1211	1445			522	419	460					1355
320	1086	1424		707	499	395	439			1004		1301
310	892	1376	1191	705	470	365	408			1003		1240
300	694	1300	1191	693	428	328	366			995		1157
290	477	1204	1177	669	377	286	315			979		1068
280	286	1077	1140	640	317	240	256			954		970
270	127	893	1085	591	250	189	195			921		875
260	54.4	659	997	522	179	140	143			883		770
250		417	859	435	112	97.2	97.2			834		679
240		198	643	342	60.0	57.1	68.6			777		598
230		83.8	417	250	12.4	12.4	46.4			716		529
220		12.4	161	161			12.4			643		473
210			40.2	97.2						564		434
200				56.6						477		405
190				12.4						406		382
180										352		362
170										310		341
160										271		318
150										236		291
140										196		254
130										167		203
120										152		175
110										112		152

ELECTRON DENSITY

PUERTO RICO 60 W 8 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	A	A	A	A	A	A			
HMIN	108							188	199	215	231	258
SCAT	68.2							58.2	69.2	61.4	49.7	61.3
HMAXF	356							347	349	358	364	398
SHMAX	1939							1514	1364	1167	898	1002
KM												
400												
390												
380												
370												
360	1640									1420	1238	1148
350	1636							1815	1528	1614	1216	1074
340	1617							1809	1521	1390	1168	971
330	1579							1771	1499	1347	1096	834
320	1520							1700	1461	1283	998	688
310	1453							1615	1405	1207	875	521
300	1363							1512	1345	1105	754	362
290	1263							1386	1257	974	608	210
280	1143							1240	1149	822	466	117
270	1018							1050	1013	654	335	60.0
260	890							863	834	477	198	12.4
250	769							679	643	302	112	
240	659							477	446	169	56.1	
230	568							310	240	87.5		
220	499							192	127	43.4		
210	446							112	66.2			
200	409							60.0	12.4			
190	379							12.4				
180	355											
170	333											
160	310											
150	283											
140	227											
130	175											
120	155											
110	143											

ELECTRON DENSITY

PUERTO RICO 60 W 9 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		A									A	A
HMIN	241	231	228	234	218	211	211	110	109	109	109	
SCAT	60.3	52.8	50.5	55.6	52.7	50.7	68.1	43.5	95.1	53.0	118	
HMAXF	376	331	343	348	333	324	348	281	341	309	384	
SHMAX	974	785	642	635	591	492	633	666	1527	1161	1855	
KM												
390											1072	
380	1290										1072	
370	1287										1068	
360	1268										1061	
350	1230		960	906			754		1167		1050	
340	1178	1215	960	902	854		752		1167		1029	
330	1115	1215	945	882	854	745	741		1163		1008	
320	1004	1207	911	849	842	744	722		1152		985	
310	834	1167	860	803	813	731	696		1133	1155	960	
300	662	1112	788	732	772	702	664		1109	1147	933	
290	477	1033	691	637	716	662	619	982	1081	1114	902	
280	298	917	573	515	631	608	551	982	1045	1067	868	
270	167	754	432	362	529	522	467	967	1004	999	831	
260	91.3	540	262	219	407	417	362	925	953	917	794	
250	49.6	310	143	105	277	293	240	858	893	838	754	
240		83.8	64.4	49.6	161	179	148	765	827	747	708	
230			12.4		76.9	92.3	83.8	627	754	657	659	
220					23.0	49.6	47.5	460	669	573	603	
210								323	581	502	545	
200								240	487	443	488	
190								188	389	394	426	
180								153	310	349	368	
170								127	245	310	326	
160								110	195	274	291	
150								93.7	152	238	255	
140								83.0	126	203	210	
130								78.4	120	168	177	
120								73.7	114	152	167	
110								12.4	60.0	60.0	83.8	

ELECTRON DENSITY

PUERTO RICO 60 W 9 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A		S		A			A	A			
HMIN	104	104	109	110	108	109	106	208	213	209	248	262
SCAT	76.8	71.3	54.8	68.0	57.3	58.1	71.8	57.5	61.9	58.2	53.0	58.6
HMAXF	378	379	353	359	344	339	340	355	346	371	391	391
SHMAX	2164	2375	2118	2428	2088	1898	1933	1443	1284	1208	1079	1190
KM												
400											1446	1569
390											1446	1569
380	1612	1907								1446	1430	1555
370	1607	1899								1446	1389	1509
360	1590	1873	2096	2227				1801		1434	1318	1461
350	1559	1828	2094	2218	2128		1922	1797	1612	1400	1227	1382
340	1508	1760	2065	2185	2125	2016	1922	1756	1608	1345	1110	1275
330	1456	1678	1994	2123	2094	2003	1912	1694	1586	1264	960	1143
320	1383	1579	1897	2050	2032	1961	1870	1618	1538	1167	794	948
310	1297	1460	1765	1952	1931	1886	1819	1519	1473	1050	608	716
300	1196	1329	1606	1816	1806	1786	1760	1384	1389	917	431	508
290	1080	1185	1428	1641	1648	1660	1680	1223	1284	754	277	310
280	978	1040	1240	1446	1471	1490	1581	1050	1151	608	170	143
270	875	906	1076	1240	1285	1307	1458	859	975	464	101	60.0
260	778	784	906	1050	1071	1096	1303	643	754	335	57.4	
250	690	679	754	875	884	897	1096	406	508	225	12.4	
240	618	590	623	716	716	716	917	240	286	143		
230	558	520	529	581	582	566	703	127	127	83.8		
220	504	471	466	489	472	455	508	64.0	53.8	51.1		
210	466	434	421	430	409	377	362	12.4		6.7		
200	432	407	389	389	368	329	268					
190	403	386	365	362	330	286	219					
180	378	371	343	339	316	256	182					
170	355	354	321	317	294	228	151					
160	334	337	297	292	270	198	125					
150	311	310	267	265	240	171	106					
140	270	270	228	228	206	151	91.3					
130	240	238	201	200	179	140	82.0					
120	209	208	187	187	169	133	77.1					
110	143	83.8	143	112	143	97.2	72.2					

ELECTRON DENSITY

PUERTO RICO 60 W 10 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	244	230	231	219	209	198	239	109	109	109	110	107
SCAT	42.2	54.4	42.3	54.7	49.8	58.2	59.1	69.9	73.4	91.9	76.1	77.9
HMAXF	354	348	325	346	318	350	364	339	322	345	331	372
SHMAX	903	980	684	810	644	599	558	1138	1550	1772	1403	1727
KM												
380												1215
370							716					1215
360	1528					707	716					1209
350	1524	1420		1096		707	707			1328		1192
340	1486	1413		1092		702	687	1050		1327	1107	1165
330	1402	1382	1240	1072		686	657	1045	1514	1320	1107	1127
320	1283	1325	1235	1032	1004	659	619	1029	1514	1304	1102	1081
310	1111	1251	1200	977	997	624	568	1004	1505	1281	1082	1025
300	897	1153	1129	899	970	577	508	967	1481	1250	1055	960
290	679	1004	1025	794	928	517	425	921	1446	1207	1020	890
280	417	794	875	667	859	446	335	859	1390	1161	980	816
270	232	556	665	540	754	379	240	788	1333	1109	934	742
260	107	335	417	401	622	310	133	702	1251	1046	883	671
250	49.6	143	198	262	463	248	67.8	608	1154	971	826	604
240		66.5	71.4	143	286	188	12.4	518	1020	887	765	547
230				71.4	143	135		439	849	794	701	501
220				12.4	68.3	89.4		370	656	705	634	465
210					12.4	54.4		310	484	616	561	439
200						12.4		262	367	530	489	417
190								219	301	446	427	406
180								183	260	379	374	395
170								153	228	324	330	379
160								127	194	280	295	353
150								108	161	240	265	310
140								96.0	135	198	240	255
130								89.9	123	164	187	220
120								83.8	116	149	167	192
110								60.0	83.8	112	49.6	143

ELECTRON DENSITY

PUERTO RICO 60 W 10 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	S						A	A	A		
HMIN	107	108	109	109	109	110	218	217	262	246	246	
SCAT	83.5	65.6	69.9	72.5	63.1	79.8	62.6	63.5	70.0	52.5	53.1	
HMAXF	378	367	365	357	338	349	373	376	408	372	380	
SHMAX	2089	1922	1934	1971	1666	1632	1204	1249	1193	864	792	
KM												
410										1316		
400										1311		
390										1294		1061
380	1528							1393	1446	1263	1167	1061
370	1524	1612	1612					1392	1443	1215	1166	1052
360	150	1607	1609	1741				1378	1423	1158	1151	1023
350	1484	1586	1592	1737			1420	1345	1385	1089	1110	980
340	1446	1542	1559	1717	1669	1415	1288	1327	1004	1054	913	
330	1394	1480	1502	1681	1662	1400	1224	1252	900	980	826	
320	1341	1405	1446	1622	1634	1373	1143	1163	772	887	727	
310	1266	1311	1359	1559	1585	1333	1037	1050	608	773	617	
300	1181	1205	1260	1473	1513	1275	910	906	434	643	486	
290	1092	1096	1152	1369	1430	1215	772	754	275	508	347	
280	998	971	1021	1240	1317	1151	624	594	143	354	229	
270	889	849	887	1068	1168	1072	466	429	60.0	211	132	
260	776	732	765	898	1004	978	310	262		105	71.4	
250	667	628	657	743	834	875	198	161		42.9	27.5	
240	573	540	564	608	666	754	119	97.2				
230	508	480	491	501	532	620	64.8	60.0				
220	457	435	437	427	424	494	12.4	19.0				
210	420	404	398	370	355	381						
200	393	383	368	335	310	286						
190	372	366	345	311	282	223						
180	354	347	326	296	259	188						
170	336	326	307	280	239	161						
160	316	299	286	262	219	138						
150	290	262	262	236	198	119						
140	258	217	235	206	169	104						
130	215	196	204	179	146	93.9						
120	189	186	186	166	133	87.3						
110	143	143	143	112	71.4	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 11 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A							A	A	A
HMIN	234	208	214	229	224	230	249	112	109	109		
SCAT	52.9	66.5	55.3	51.4	41.3	63.0	76.9	83.9	77.4	85.1		
HMAXF	355	356	356	353	332	343	383	349	343	363		
SHMAX	762	777	637	495	415	467	647	1070	1342	1749		
KM												
390							697					
380							697					
370							692			1277		
360	1096	917	804	697			682			1277		
350	1093	916	801	697		608	663	854	1107	1270		
340	1073	906	784	687	697	607	643	852	1107	1254		
330	1032	885	754	664	697	601	614	843	1100	1226		
320	974	854	716	626	683	588	579	827	1079	1187		
310	892	817	668	578	643	565	533	806	1053	1148		
300	778	762	608	512	591	540	472	781	1017	1099		
290	643	688	525	432	523	504	395	749	976	1044		
280	477	589	439	343	433	451	310	709	930	981		
270	320	477	355	252	330	379	198	661	875	917		
260	186	354	272	165	228	298	97.2	608	810	853		
250	97.2	232	185	97.2	131	179	12.4	551	735	786		
240	46.5	143	116	53.9	71.4	78.1		490	653	716		
230		91.1	67.6	5.5	40.2			433	568	634		
220		53.5	40.2					378	485	549		
210		12.4						324	411	468		
200								276	348	405		
190								232	295	357		
180								193	252	315		
170								157	214	280		
160								128	182	246		
150								107	158	212		
140								91.1	138	179		
130								80.7	125	151		
120								74.0	118	137		
110									83.8	127		

ELECTRON DENSITY

PUERTO RICO 60 W 11 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A		S		A	A	A				
HMIN		108	110	108	109			215	235	227	217	250
SCAT		61.0	54.1	57.2	55.4			61.8	67.0	55.5	64.5	66.3
HMAXF		353	356	344	327			375	389	355	350	400
SHMAX		2070	2060	2065	1775			1068	1176	873	770	760
KM												
410												875
400												875
390									1341			870
380								1191	1335			855
370								1189	1314			830
360		1937	2048					1173	1279	1215	939	797
350		1937	2042	2144				1143	1226	1213	939	754
340		1916	1989	2142				1096	1162	1194	933	694
330		1855	1919	2112	1969			1030	1082	1156	917	623
320		1786	1815	2049	1961			955	971	1100	886	535
310		1688	1682	1947	1923			864	834	1019	848	431
300		1573	1529	1823	1846			768	688	904	800	319
290		1438	1341	1669	1751			669	524	745	732	212
280		1278	1173	1466	1617			565	362	573	643	127
270		1096	1004	1240	1446			452	219	389	540	78.8
260		917	834	1027	1230			325	127	240	426	47.4
250		763	688	814	1004			206	71.4	133	286	
240		636	573	643	794			121	33.1	71.4	161	
230		545	499	514	608			69.0		20.3	77.9	
220		481	446	439	487			33.1			30.0	
210		435	409	399	412							
200		400	382	372	362							
190		373	360	348	330							
180		353	342	323	301							
170		337	318	300	272							
160		310	282	277	242							
150		274	240	250	207							
140		251	207	219	177							
130		219	192	197	159							
120		189	181	186	151							
110		127	40.2	127	127							

ELECTRON DENSITY

PUERTO RICO 60 W 12 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	F	F	F	F	F			A	A	A	A	A
HMIN	267	260	231	219	241	199	233					
SCAT	44.0	51.5	51.4	59.4	51.6	64.6	73.9					
HMAXF	387	380	354	353	352	309	392					
SHMAX	537	659	708	836	530	465	620					
KM												
400							625					
390	814	949					625					
380	804	949					621					
370	780	941					611					
360	732	914	1004	1072	794		596					
350	672	868	1003	1072	793		575					
340	599	807	987	1059	782		549					
330	517	728	950	1027	754		515					
320	417	628	896	984	716		477					
310	310	508	824	928	659	608	427					
300	198	362	742	857	583	604	374					
290	112	219	643	763	486	594	319					
280	63.0	112	518	651	362	576	262					
270	19.3	54.8	335	508	219	550	198					
260			179	348	102	520	130					
250			89.4	179	49.6	479	75.8					
240			49.6	92.4		420	42.5					
230				52.2		335						
220				6.3		206						
210						78.9						
200						12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 12 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	B			A			A			A	A
HMIN	109	109	109	108	109	109	110		208	245	251	259
SCAT	77.5	70.9	71.8	87.1	60.5	71.4	61.7		68.8	58.2	67.3	61.2
HMAXF	372	368	360	366	345	356	342		364	378	391	401
SHMAX	1803	1818	1749	1889	1430	1488	1253		909	783	795	732
KM												
410												896
400											906	896
390											906	888
380	1328									1016	901	867
370	1328	1446	1446	1406					993	1010	885	838
360	1320	1441	1446	1405		1328			983	985	857	794
350	1301	1422	1439	1394	1367	1326	1341		983	952	824	737
340	1270	1389	1417	1375	1365	1311	1341		964	904	777	665
330	1227	1341	1382	1346	1347	1284	1328		931	834	716	573
320	1173	1282	1330	1304	1301	1243	1298		892	743	648	477
310	1113	1211	1264	1260	1253	1190	1250		842	643	561	362
300	1038	1111	1189	1206	1178	1131	1180		774	519	464	248
290	953	1004	1096	1143	1086	1042	1101		691	389	352	149
280	864	898	988	1058	974	927	994		599	255	240	92.5
270	773	787	865	960	846	804	860		494	143	127	53.5
260	674	679	744	850	716	679	716		389	76.5	60.0	5.8
250	602	590	628	740	591	557	552		286	36.2		
240	532	515	535	637	490	459	417		188			
230	477	457	464	540	417	384	323		112			
220	434	414	412	465	365	332	260		60.0			
210	401	384	379	406	333	298	219		12.4			
200	377	362	357	366	310	275	190					
190	359	351	342	339	294	256	166					
180	347	341	326	322	276	238	142					
170	336	328	310	307	256	216	120					
160	321	313	288	292	232	190	101					
150	304	291	262	272	202	161	88.7					
140	283	260	224	246	161	139	81.4					
130	253	226	197	214	142	125	77.1					
120	216	207	186	189	134	117	72.7					
110	127	143	97.2	143	113	83.8						

ELECTRON DENSITY

PUERTO RICO 60 W 13 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												A
HMIN	257	251	236	228	250	229	243	110	110	106	107	
SCAT	64.7	52.3	46.9	52.9	54.8	55.7	53.8	74.6	59.7	61.4	66.2	
HMAXF	408	359	337	348	371	345	361	332	317	326	351	
SHMAX	821	658	534	509	495	506	466	1061	1107	1233	1524	
KM												
410	960											
400	957											
390	942											
380	917				688							
370	878				688		652					
360	830	1016			681		652				1215	
350	766	1009		716	658	716	644				1215	
340	679	980	854	713	630	715	623	982			1206	
330	582	939	850	697	590	704	595	982		1016	1184	
320	468	875	826	667	533	681	554	976	1096	1013	1147	
310	354	781	785	628	455	651	500	960	1092	992	1096	
300	247	643	724	573	362	608	434	934	1073	958	1030	
290	155	477	643	499	268	534	354	903	1037	917	960	
280	94.7	299	540	417	174	446	262	862	986	871	887	
270	58.0	143	417	318	97.2	335	161	811	924	821	812	
260	18.7	63.5	262	208	49.6	219	78.1	750	849	770	735	
250			127	118		117	42.6	679	768	716	660	
240			43.9	62.7		57.7		594	679	661	593	
230				12.4		4.5		502	590	608	534	
220								404	501	561	481	
210								310	422	516	436	
200								244	356	471	398	
190								198	303	422	369	
180								166	262	374	348	
170								139	226	324	327	
160								117	193	278	298	
150								98.7	165	242	266	
140								85.8	142	214	236	
130								78.5	124	188	196	
120								72.1	113	161	172	
110								40.2	40.2	143	143	

ELECTRON DENSITY

PUERTO RICO 60 W 13 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		S				A	A	A				
HMIN	103	110	110	109	109				208	249	241	264
SCAT	58.0	72.5	75.0	49.4	49.1				57.5	57.4	49.3	60.5
HMAXF	334	359	361	334	326				357	394	374	392
SHMAX	1725	1884	1829	1466	1458				821	803	712	718
KM												
400										993		906
390										992		906
380										979	971	898
370			1446							949	969	877
360		1555	1446						993	904	945	841
350		1550	1438						980	847	903	797
340	1683	1529	1417	1555					971	781	850	739
330	1673	1494	1383	1552	1569				936	699	785	666
320	1628	1446	1335	1523	1563				888	600	705	573
310	1578	1365	1269	1461	1511				826	487	608	471
300	1502	1280	1196	1358	1446				754	362	499	347
290	1387	1193	1117	1240	1341				669	247	382	209
280	1240	1107	1027	1096	1227				573	156	262	102
270	1060	1004	930	960	1104				465	91.1	151	49.6
260	892	886	825	804	960				362	51.3	83.8	
250	741	767	727	665	794				251	6.7	47.5	
240	620	657	635	553	663				157			
230	531	557	553	471	564				97.3			
220	467	481	485	415	470				53.9			
210	421	423	430	379	412				12.4			
200	389	384	387	354	372							
190	367	356	356	335	340							
180	349	335	332	319	313							
170	332	311	310	297	286							
160	310	279	289	269	251							
150	286	237	259	231	215							
140	251	206	227	192	184							
130	219	191	201	170	162							
120	183	180	185	112	151							
110	164	40.2	40.2	12.4	112							

ELECTRON DENSITY

PUERTO RICO 60 W 14 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	A	A	A	A						A	A	A
HMIN	256	251	230	307	238	229	248	110	110	102	105	
SCAT	48.3	47.1	55.6	48.1	53.5	49.9	50.2	58.6	84.9	75.9	55.9	
HMAXF	376	352	359	416	344	353	330	303	380	371	326	
SHMAX	586	565	551	464	451	520	519	701	1291	1734	1474	
KM												
420				679								
410				676								
400				659								
390				625					865			
380	854			579					865	1316		
370	851			523					862	1315		
360	820	906	716	460		745			853	1308		
350	788	906	711	389	643	744			838	1289		
340	732	893	695	300	642	732	854		814	1259		
330	660	856	666	198	631	702	854		786	1215	1487	
320	573	803	626	105	609	659	845		754	1164	1483	
310	484	730	577	40.2	576	608	817	794	719	1101	1457	
300	375	634	515		532	534	777	793	679	1025	1393	
290	240	515	440		477	446	716	783	641	943	1318	
280	134	362	356		404	350	625	762	600	859	1230	
270	71.4	171	268		323	257	499	729	557	772	1119	
260	26.8	71.4	184		219	169	350	686	515	688	988	
250			112		112	93.9	143	627	477	608	848	
240			56.6		28.2	53.5		548	436	540	709	
230						6.1		452	399	481	581	
220								357	366	429	487	
210								274	335	387	426	
200								219	305	354	385	
190								177	278	326	355	
180								148	250	302	329	
170								125	222	277	304	
160								107	196	251	275	
150								94.6	171	226	242	
140								85.2	148	201	209	
130								79.5	131	178	185	
120								74.5	120	161	170	
110								49.6	83.8	146	152	

ELECTRON DENSITY

PUERTO RICO 60 W 14 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	A				A					
HMIN	107			106	101	110		211	233	238	238	268
SCAT	48.7			72.0	60.7	56.1		48.7	47.1	56.8	51.7	46.6
HMAXF	312			367	362	337		305	368	395	375	389
SHMAX	1377			1481	1725	1670		718	713	778	644	502
KM												
400										939		
390										937		745
380										923	865	738
370				1096	1528					889	862	712
360				1093	1519				1050	844	846	667
350				1081	1480				1043	794	811	612
340				1058	1436	1846			1013	730	764	540
330				1022	1362	1839			960	649	698	453
320	1613			977	1267	1805			882	554	620	362
310	1611			925	1159	1735		1096	794	456	526	270
300	1587			866	1040	1650		1093	679	362	426	179
290	1521			803	917	1531		1070	548	262	329	104
280	1428			736	781	1375		1021	403	174	231	60.0
270	1311			670	661	1196		952	269	115	149	12.4
260	1153			608	562	1004		875	161	76.9	90.6	
250	960			547	488	794		778	83.8	49.6	53.7	
240	766			493	436	608		662	43.1	12.4	12.4	
230	573			446	399	463		522				
220	451			411	371	368		219				
210	393			383	349	308						
200	358			359	330	273						
190	335			338	313	250						
180	320			317	295	230						
170	305			297	275	209						
160	290			276	251	186						
150	258			248	225	164						
140	209			216	202	145						
130	170			192	174	129						
120	154			171	154	117						
110	149			112	127	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 15 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		F										
HMIN	254	272	276	279	295	273	275	101	103	103	105	100
SCAT	52.2	58.6	73.2	42.9	54.9	53.8	50.3	77.9	76.5	70.4	83.0	88.2
HMAXF	364	397	430	378	417	391	359	401	362	337	360	347
SHMAX	562	590	671	446	574	600	486	857	797	872	1018	1090
KM												
440			716									
430			716									
420			713		784							
410			709		780			590				
400		736	686		764	834		590				
390		733	656		734	834		587				
380		720	608	735	693	826		580				
370	814	692	586	729	637	803		565	557		661	
360	812	658	547	699	573	763	784	546	557		661	
350	799	616	482	654	477	716	777	524	553		658	735
340	767	563	408	592	371	648	754	498	545	652	651	734
330	725	504	335	516	262	559	716	469	531	650	638	729
320	667	440	257	426	151	446	665	436	514	643	620	718
310	580	362	179	310	77.7	335	594	402	492	621	600	699
300	483	251	108	189	33.1	240	498	367	464	599	573	679
290	378	143	62.1	97.2		127	362	332	433	573	542	654
280	262	65.6	26.2	12.4		60.0	179	299	398	544	508	627
270	143							270	362	513	473	597
260	55.1							247	328	480	439	562
250								228	299	444	407	522
240								213	275	406	378	477
230								201	257	371	354	429
220								191	244	341	334	389
210								181	235	316	319	358
200								168	227	299	306	334
190								154	220	285	298	324
180								139	209	269	289	313
170								123	196	251	277	300
160								109	178	229	262	286
150								95.7	157	201	242	261
140								85.2	136	167	211	235
130								78.7	121	143	174	183
120								72.9	109	135	155	159
110								55.9	90.5	123	143	150
100												97.2

ELECTRON DENSITY

PUERTO RICO 60 W 15 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A							F	F	F
HMIN				108	105	108	110	279	298			
SCAT				58.2	72.3	60.6	66.0	52.1	57.7			
HMAXF				337	362	346	366	422	444			
SHMAX				1015	1186	1041	1135	929	1185			
KM												
450									1473			
440									1472			
430								1167	1452			
420								1166	1399			
410								1151	1341			
400								1108	1253			
390								1050	1150			
380								980	1024			
370					875		1004	896	888			
360					875		1002	794	732			
350					869	885	989	690	540			
340				834	855	883	965	588	362			
330				831	832	868	926	468	219			
320				816	800	840	878	323	107			
310				788	761	803	823	198	58.2			
300				746	716	759	762	121	12.4			
290				697	661	708	692	74.9				
280				643	608	654	620	12.4				
270				581	551	596	544					
260				520	499	540	466					
250				463	454	485	394					
240				417	417	435	335					
230				381	385	389	289					
220				355	359	352	251					
210				334	335	319	219					
200				321	315	289	192					
190				309	293	259	168					
180				298	272	232	147					
170				287	251	205	126					
160				269	227	177	107					
150				246	205	149	91.7					
140				219	177	129	81.3					
130				193	151	115	75.1					
120				174	138	105	66.4					
110				161	130	97.2	12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 16 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	F	F	F	F	F	F	F	A	F	F	A	
HMIN												100
SCAT												94.6
HMAXF												350
SHMAX												1027
KM												
360												634
350												634
340												632
330												627
320												618
310												605
300												588
290												570
280												546
270												519
260												490
250												460
240												432
230												406
220												385
210												367
200												355
190												345
180												334
170												308
160												275
150												240
140												215
130												198
120												187
110												174
100												83.8

ELECTRON DENSITY

PUERTO RICO 60 W 16 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	A	A	A	A						F
HMIN	110						109	220	242	310	299	
SCAT	67.0						52.5	57.9	56.2	46.4	55.1	
HMAXF	319						290	353	385	407	414	
SHMAX	1048						507	361	436	352	407	
KM												
420											557	
410										540	556	
400										537	548	
390									542	522	529	
380									541	493	504	
370									532	452	469	
360								439	515	401	426	
350								439	489	343	375	
340								434	455	279	304	
330								422	411	219	219	
320	906							402	358	143	137	
310	903							378	304	12.4	74.4	
300	888						557	347	247		12.4	
290	862						557	313	186			
280	828						552	275	132			
270	786						536	232	91.8			
260	730						509	186	60.0			
250	659						477	135	36.4			
240	573						432	86.2				
230	493						379	49.6				
220	427						325					
210	380						274					
200	352						234					
190	332						203					
180	321						179					
170	310						158					
160	291						138					
150	270						119					
140	243						103					
130	213						91.5					
120	190						79.9					
110	127						12.4					

ELECTRON DENSITY

PUERTO RICO 60 W 17 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL			F						A	A	A	A
HMIN	367		268	289	245	310	308	105				
SCAT	45.0		51.1	58.8	58.7	43.5	63.1	59.0				
HMAXF	466		381	398	377	394	436	346				
SHMAX	376		317	356	361	219	347	554				
KM												
470	590											
460	588											
450	573											
440	542							424				
430	500							423				
420	446							417				
410	384							402				
400	310				469		375	387				
390	231			446	467		374	366				
380	120			446	457	446	365	339				
370	40.2			441	441	445	344	302				
360				427	420	437	316	256				
350				404	391	423	278	206	492			
340				373	352	401	232	143	491			
330				335	305	374	179	88.8	483			
320				290	253	342	104	60.0	467			
310				240	190	303	12.4	12.4	449			
300				188	103	259			420			
290				121	12.4	209			382			
280				64.0		153			340			
270				12.4		94.3			293			
260						60.0			252			
250						31.4			219			
240									197			
230									181			
220									173			
210									166			
200									157			
190									145			
180									130			
170									112			
160									95.5			
150									82.7			
140									73.8			
130									68.4			
120									64.3			
110									60.0			

ELECTRON DENSITY

PUERTO RICO 60 W 17 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			A			A					A	
HMIN	110	105		110	103		107	259	272	305	310	326
SCAT	90.7	76.8		56.5	63.0		49.7	46.6	54.4	60.0	46.6	41.6
HMAXF	306	321		298	317		303	346	382	396	387	415
SHMAX	661	848		693	754		628	383	489	396	357	328
KM												
420												543
410												541
400										608		519
390									679	605	616	488
380									679	591	613	446
370									670	564	594	392
360									650	526	568	335
350								634	618	477	520	268
340								632	577	409	453	198
330		590						616	519	335	374	83.8
320		590			582			584	446	249	274	
310	446	587			580		705	540	367	127	49.6	
300	446	579		582	569		704	482	286			
290	443	565		579	549		692	417	172			
280	43	546		562	525		663	310	71.4			
270	432	523		537	496		623	179				
260	422	496		508	464		573	12.4				
250	407	464		477	432		508					
240	38	434		442	400		435					
230	371	407		409	372		362					
220	355	381		378	349		300					
210	340	358		353	330		255					
200	327	340		333	315		222					
190	315	331		319	302		194					
180	306	323		304	289		168					
170	298	315		289	271		146					
160	291	304		270	248		128					
150	280	280		254	223		113					
140	251	267		240	200		101					
130	208	240		213	180		92.7					
120	185	214		189	168		85.5					
110	40.2	176		112	143		40.2					

ELECTRON DENSITY

PUERTO RICO 60 W 18 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL						F			A	A		
HMIN	321	237	249	230	289	309	277	109	105	100	110	105
SCAT	40.1	28.3	46.5	52.2	41.6	48.4	57.2	44.1	33.8	43.3	75.4	62.3
HMAXF	403	301	339	363	380	405	387	299	269	262	338	345
SHMAX	340	370	304	326	271	300	313	587	676	644	1177	1489
KM												
410	625					461						
400	624					460						
390	608				461	451	417					
380	570				461	430	416					
370	517			417	454	403	408					
360	446			417	432	362	394					
350	362			411	398	314	373					1155
340	254		500	397	354	258	348				885	1153
330	112		496	373	302	198	314				883	1134
320			478	343	240	118	270				871	1100
310		960	452	310	173	12.4	222				849	1055
300		960	413	270	93.8		167	688			824	1004
290		926	355	229	12.4		106	681			794	943
280		834	286	189			40.2	649			754	882
270		679	211	151				608	1027	774	707	818
260		477	112	114				553	1009	773	659	754
250		198	12.4	79.3				489	945	758	608	695
240		49.6		47.7				424	834	716	548	636
230								362	701	661	499	577
220								304	548	599	455	523
210								257	423	528	417	477
200								221	341	454	389	439
190								195	286	382	367	408
180								171	251	324	345	381
170								149	219	286	320	357
160								127	190	254	290	335
150								109	161	219	257	310
140								95.8	139	188	222	277
130								87.8	124	167	188	240
120								76.6	116	153	165	204
110								12.4	97.2	139	83.8	181
100										49.6		

ELECTRON DENSITY

PUERTO RICO 60 W 18 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			<			A	A			A	A	
HMIN	110	100		105	100			263	240	245	278	300
SCAT	60.5	60.7		42.3	55.1			53.0	51.1	33.1	43.9	45.1
HMAXF	356	336		314	310			358	348	303	372	379
SHMAX	1770	1805		1495	1453			891	910	498	462	439
KM												
380											735	774
370											735	766
360	1528							1290			721	735
350	1524							1282	1328		687	689
340	1502	1654						1252	1319		643	628
330	1451	1651						1192	1285		564	550
320	1383	1628		1815	1555			1120	1223		485	417
310	1291	1583		1811	1555			1022	1143	1143	401	240
300	1191	1510		1752	1544			903	1038	1140	315	12.4
290	1087	1423		1650	1507			766	893	1096	219	
280	974	1307		1509	1446			608	716	1004	60.0	
270	861	1186		1341	1347			335	540	855		
260	754	1064		1132	1231				339	679		
250	657	931		917	1107				143	446		
240	580	801		742	960				12.4			
230	516	670		588	794							
220	473	573		490	643							
210	441	494		424	515							
200	417	430		385	424							
190	392	400		360	367							
180	367	371		342	331							
170	344	347		320	304							
160	323	325		293	278							
150	299	297		262	248							
140	262	273		230	219							
130	210	247		197	193							
120	192	206		176	167							
110	143	181		162	150							
100		127			71.4							

ELECTRON DENSITY

PUERTO RICO 60 W 19 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	F							A	A		C	A
HMIN		290	239	240	250	290	320			100		
SCAT		39.2	44.9	38.3	54.9	53.4	54.1			60.7		
HMAXF		364	331	312	363	398	407			291		
SHMAX		450	503	341	381	388	342			602		
KM												
410							519					
400						540	517					
390						537	506					
380						525	486					
370		854			500	504	459					
360		852			500	473	422					
350		824			493	433	371					
340		771	854		478	383	303					
330		692	854		453	323	219					
320		589	840	688	423	257	60.0					
310		469	804	688	384	184						
300		310	754	669	338	97.2				500		
290		97.2	667	633	286	12.4				500		
280			565	569	234					496		
270			446	477	179					485		
260			286	362	120					464		
250			112	198	40.2					437		
240			12.4	49.6						408		
230										377		
220										348		
210										325		
200										307		
190										296		
180										286		
170										271		
160										253		
150										231		
140										207		
130										178		
120										156		
110										141		
100										71.4		

ELECTRON DENSITY

PUERTO RICO 60 W 19 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			A	A	A	A	A	A		A		
HMIN	100	100					109	250	249	300	310	300
SCAT	61.2	60.2					64.5	50.7	44.9	47.3	44.4	42.0
HMAXF	305	318					340	339	363	382	396	378
SHMAX	1045	1226					961	629	585	607	538	510
KM												
400											896	
390										982	892	
380										982	865	896
370									854	967	816	888
360									853	927	749	850
350							854		836	870	667	794
340							854	939	794	794	566	720
330							849	931	736	698	446	635
320		1027					834	901	669	590	262	540
310	971	1022					804	855	589	446	40.2	362
300	970	1009					768	797	499	127		71.4
290	955	960					726	725	409			
280	926	917					679	643	310			
270	889	863					623	533	198			
260	840	802					567	401	107			
250	772	740					508	161	12.4			
240	688	675					454					
230	596	608					400					
220	508	545					347					
210	440	492					298					
200	394	449					254					
190	363	415					216					
180	344	381					184					
170	325	353					156					
160	305	329					132					
150	279	308					113					
140	246	287					99.4					
130	214	259					90.8					
120	192	235					81.3					
110	172	212					12.4					
100	40.2	97.2										

ELECTRON DENSITY

PUERTO RICO 60 W 20 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL		S	S		A			A	A	A	A	
HMIN	310			199	197	269	270			100	100	100
SCAT	48.0			61.2	53.0	47.7	46.9			71.1	52.3	78.2
HMAXF	393			319	321	363	349			289	287	347
SHMAX	558			314	208	194	179			667	798	1294
KM												
400	917											
390	916											
380	901											
370	864					304						
360	808					304						
350	734					298	304					917
340	643					286	301					916
330	518				274	266	292					907
320	335			382	274	240	274					891
310	112			380	271	211	251					866
300				373	263	175	222					838
290				360	248	134	184			573	784	798
280				343	231	78.2	127			571	780	751
270				321	210	12.4	12.4			563	763	696
260				293	184					549	728	639
250				259	157					528	682	581
240				219	127					502	627	529
230				179	97.2					471	564	485
220				140	67.8					440	501	450
210				99.5	46.2					408	444	422
200				12.4	12.4					377	399	403
190										346	362	387
180										314	335	371
170										281	310	353
160										246	284	331
150										204	249	300
140										169	212	252
130										150	187	208
120										138	173	189
110										130	162	173
100										71.4	83.8	97.2

ELECTRON DENSITY

PUERTO RICO 60 W 20 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	B	A										
HMIN		110	110	109	100	110	110	250	259	300	290	260
SCAT		67.5	49.5	57.9	48.8	49.7	42.6	58.0	49.0	39.1	34.0	41.6
HMAXF		356	337	347	347	341	293	361	369	381	380	356
SHMAX		1723	1589	1789	1743	1832	1152	984	861	628	593	699
KM												
390										1119	1119	
380										1119	1119	
370								1203	1265	1096	1096	
360		1420						1203	1253	1031	1018	1191
350		1417		1727	1846	2128		1192	1207	941	917	1185
340		1400	1583	1720	1836	2128		1162	1147	834	794	1148
330		1367	1576	1688	1789	2103		1112	1060	701	643	1076
320		1312	1529	1622	1691	2032		1050	944	552	477	971
310		1244	1451	1543	1568	1917		973	808	335	286	841
300		1165	1350	1432	1422	1763	1786	891	663	127	143	692
290		1081	1240	1305	1261	1576	1783	800	508		40.2	523
280		987	1125	1143	1116	1377	1742	703	310			310
270		891	994	1004	940	1143	1649	601	143			127
260		794	861	853	772	934	1507	462	12.4			12.4
250		693	740	716	633	731	1325	219				
240		602	634	589	520	561	1050					
230		525	545	494	439	446	754					
220		466	480	434	385	367	464					
210		422	433	392	350	314	303					
200		389	398	366	326	281	231					
190		365	375	350	307	256	195					
180		346	356	335	290	235	170					
170		325	335	313	268	214	147					
160		300	306	286	246	193	125					
150		266	268	249	222	169	106					
140		235	227	212	187	150	90.8					
130		213	197	183	162	138	81.0					
120		196	183	168	152	128	75.0					
110		112	60.0	97.2	143	60.0	12.4					
100					12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 21 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	
HMIN	270	230	230	300	279	240	258	100	100			100
SCAT	44.3	35.9	45.2	52.6	49.7	40.7	48.6	48.1	96.8			63.2
HMAXF	369	304	327	413	385	325	336	285	323			344
SHMAX	763	711	483	481	421	344	241	409	786			1583
KM												
420				661								
410				660								
400				651								
390				627	625							
380				595	624							
370	1252			551	612							
360	1236			492	585							
350	1187			428	551							1316
340	1116			357	498		410					1314
330	1004		764	278	429	608	409		557			1299
320	860		760	187	355	606	399		557			1267
310	698	1528	735	103	276	588	381		554			1215
300	508	1523	698	12.4	193	552	358		549			1152
290	310	1462	638		97.3	497	321	446	540			1072
280	127	1355	556		12.4	430	268	445	524			982
270	12.4	1181	466			354	198	436	508			892
260		960	373			262	60.0	417	490			794
250		540	277			143		387	471			705
240		198	179			40.2		348	452			619
230		12.4	49.6					307	433			540
220								265	412			484
210								228	386			441
200								200	351			412
190								179	312			392
180								161	275			376
170								142	240			359
160								125	208			335
150								108	175			303
140								93.9	149			269
130								83.5	130			233
120								78.3	119			201
110								73.2	108			184
100								40.2	12.4			97.2

ELECTRON DENSITY

PUERTO RICO 60 W 21 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A				A					
HMIN				110	100	100		250	239	249	290	290
SCAT				63.2	48.0	47.5		48.5	41.8	46.2	48.8	40.0
HMAXF				338	316	302		345	338	369	387	374
SHMAX				1432	1227	1061		747	695	694	633	548
KM												
390											960	
380											956	982
370										1004	932	979
360										994	886	947
350								1096		960	824	885
340				1240				1093	1167	901	735	803
330				1236				1069	1157	824	632	696
320				1216	1328			1018	1109	734	517	573
310				1181	1323	1215		948	1037	637	389	417
300				1130	1291	1215		866	936	533	247	219
290				1065	1228	1196		773	810	403	60.0	12.4
280				981	1143	1151		668	670	271		
270				889	1021	1078		540	508	161		
260				794	884	980		362	286	77.6		
250				710	754	875		161	112	12.4		
240				624	618	754			12.4			
230				554	508	624						
220				502	436	508						
210				464	383	417						
200				432	350	353						
190				398	328	306						
180				360	312	273						
170				321	291	245						
160				287	270	219						
150				250	245	197						
140				206	214	179						
130				175	183	158						
120				162	159	138						
110				97.2	146	119						
100					40.2	12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 22 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL												
HMIN	290	260	240	270	279	250	260	220	110	100	100	110
SCAT	38.7	41.3	40.0	40.8	38.4	43.0	35.3	36.4	85.9	74.8	65.0	67.9
HMAXF	365	343	327	358	370	345	325	293	303	304	315	348
SHMAX	475	489	473	420	394	391	319	332	710	911	1157	1614
KM												
380					707							
370	896				707							
360	892			726	695							
350	856	877		718	659	643						1316
340	794	876		685	600	640						1311
330	710	855	860	635	519	622	697					1294
320	608	805	854	573	431	584	694				989	1261
310	477	734	821	495	335	532	664		520	754	988	1211
300	310	637	762	402	219	466	608	697	540	754	976	1153
290	97.2	521	679	286	103	389	530	697	587	747	951	1078
280		389	573	153	12.4	310	433	676	580	734	917	994
270		198	446	40.2		219	262	632	567	714	871	907
260		12.4	286			112	12.4	554	550	686	815	819
250			127			12.4		436	531	653	754	735
240			12.4					286	509	614	683	653
230								179	484	566	608	577
220								12.4	454	516	540	515
210									421	466	480	467
200									380	417	433	427
190									331	375	398	393
180									279	335	369	362
170									231	302	345	335
160									191	271	318	306
150									156	240	288	280
140									133	212	253	248
130									122	188	219	209
120									114	170	192	188
110									49.6	151	171	143
100										12.4	40.2	

ELECTRON DENSITY

PUERTO RICO 60 W 22 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL			S									
HMIN	100	100		110	110	110	109	220	239	250	269	289
SCAT	53.4	46.4		47.4	60.3	53.3	49.8	56.2	47.6	52.0	48.4	54.0
HMAXF	335	316		331	348	330	325	350	353	355	382	408
SHMAX	1724	1672		1689	1870	1574	1327	1082	835	915	753	674
KM												
410												896
400												892
390											1096	872
380											1095	838
370											1078	789
360								1290	1215	1341	1035	722
350					1786			1290	1214	1339	970	649
340	166			1846	1778	1727		1279	1193	1315	886	560
330	1666			1845	1746	1727	1612	1248	1143	1266	777	464
320	1638	1410		1820	1680	1713	1607	1189	1068	1191	659	362
310	1580	1002		1744	1601	1669	1575	1121	971	1096	533	240
300	1484	1853		1633	1494	1586	1504	1035	857	960	397	127
290	1366	1757		1490	1368	1482	1410	940	736	785	240	12.4
280	1240	1620		1330	1229	1353	1277	840	595	608	118	
270	1096	1446		1166	1067	1206	1122	731	434	417	12.4	
260	951	1240		986	917	1050	973	624	262	198		
250	819	1025		794	780	875	805	515	119	40.2		
240	699	834		656	656	716	643	389	12.4			
230	599	670		550	558	558	484	219				
220	522	557		470	483	446	376	40.2				
210	467	477		417	423	373	297					
200	428	428		382	377	321	240					
190	398	389		355	341	286	196					
180	372	364		335	312	256	164					
170	348	348		322	284	230	134					
160	325	328		310	257	206	110					
150	303	307		276	228	181	92.1					
140	281	277		240	193	152	82.0					
130	254	240		212	172	127	77.1					
120	217	213		188	161	118	72.1					
110	196	191		97.2	49.6	60.0	12.4					
100	127	97.3										

ELECTRON DENSITY

PUERTO RICO 60 W 23 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A			
HMIN	260	239	220	239	249	229	250			100	110	100
SCAT	38.0	39.7	33.9	41.1	40.9	52.5	36.1			41.1	58.9	51.7
HMAXF	360	329	294	333	337	332	315			275	312	330
SHMAX	480	527	356	352	298	322	186			813	1096	1450
KM												
370	896											
360	896											
350	881											
340	834			608	532	469						1420
330	754	989		607	528	469						1420
320	656	968		592	508	462	403				982	1406
310	527	922		558	474	448	401				982	1365
300	380	847	754	508	423	425	386				973	1290
290	226	737	751	446	357	394	355				945	1195
280	97.2	595	720	362	281	351	310			971	904	1086
270	12.4	431	653	278	190	295	240			967	856	973
260		219	566	179	97.2	231	161			931	802	852
250		89.7	462	92.5	12.4	164	12.4			875	743	726
240		12.4	310	12.4		87.1				794	679	618
230			127			12.4				716	619	531
220			12.4							622	558	470
210										540	499	428
200										457	446	396
190										389	398	370
180										335	359	344
170										294	325	320
160										258	290	300
150										226	255	277
140										195	222	231
130										169	192	193
120										153	172	173
110										136	143	161
100										40.2		49.6

ELECTRON DENSITY

PUERTO RICO 60 W 23 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	B		A							
HMIN			100			100	109	230	220	219	280	290
SCAT			50.3			55.6	54.1	40.0	50.4	55.8	41.0	41.1
HMAXF			329			327	320	317	327	354	377	377
SHMAX			1848			1585	1479	882	904	815	592	566
KM												
380											982	982
370											976	975
360										1004	936	935
350										1003	875	875
340										989	794	786
330			1922			1669	1786		1341	960	696	679
320			1907			1662	1786	1583	1335	910	573	563
310			1837			1631	1771	1570	1304	849	446	389
300			1752			1572	1726	1492	1247	775	286	219
290			1632			1475	1647	1382	1159	690	143	60.0
280			1485			1363	1541	1240	1050	593	40.2	
270			1327			1240	1404	1071	917	498		
260			1170			1081	1240	859	754	400		
250			1015			926	1050	573	540	299		
240			863			772	808	240	310	191		
230			716			629	608	12.4	143	102		
220			601			508	446		40.2	12.4		
210			508			425	330					
200			446			362	259					
190			397			318	219					
180			362			283	185					
170			332			254	158					
160			307			229	137					
150			279			206	120					
140			252			179	104					
130			219			155	91.3					
120			192			137	78.5					
110			165			122	12.4					
100			12.4			40.2						

ELECTRON DENSITY

PUERTO RICO 60 W 24 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL										A	A	A
HMIN	268	260	259	239	239	229	220	99	99			
SCAT	36.1	38.5	47.7	41.8	36.9	35.3	51.9	36.2	96.7			
HMAXF	346	339	358	333	323	314	302	253	301			
SHMAX	447	484	484	440	393	326	353	422	741			
KM												
360			774									
350	896		768									
340	890	896	743	764								
330	848	883	706	763	774							
320	776	834	649	742	773	652						
310	679	766	565	705	750	649	573		573			
300	552	679	459	643	701	623	573		573			
290	380	564	345	559	621	573	566		572			
280	219	437	219	465	508	498	548		567			
270	60.0	262	97.2	346	389	399	518		559			
260		60.0	12.4	198	240	286	481	609	548			
250				83.8	112	179	429	608	532			
240				12.4	12.4	80.3	362	580	513			
230						12.4	219	540	493			
220							40.2	484	471			
210								413	446			
200								343	417			
190								276	382			
180								223	335			
170								184	280			
160								153	228			
150								131	190			
140								112	159			
130								96.2	134			
120								86.5	121			
110								72.4	112			
100								12.4	12.4			

ELECTRON DENSITY

PUERTO RICO 60 W 24 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A		A	A	A	A	B				
HMIN			110					230	220	240	269	290
SCAT			55.1					47.8	40.7	51.0	42.1	40.0
HMAXF			338					331	306	362	375	381
SHMAX			2024					980	659	765	516	490
KM												
390												834
380											834	834
370										1004	831	819
360										1004	808	776
350										991	763	709
340			2032					1528		960	692	627
330			2022					1528		905	608	540
320			1979					1509		834	508	446
310			1907					1456	1191	754	399	310
300			1786					1366	1185	661	286	170
290			1645					1247	1146	564	179	12.4
280			1482					1096	1069	463	87.7	
270			1312					917	960	366	12.4	
260			1143					692	818	273		
250			981					417	660	179		
240			813					198	446	40.2		
230			670					12.4	198			
220			565						40.2			
210			488									
200			432									
190			393									
180			365									
170			344									
160			321									
150			289									
140			256									
130			233									
120			212									
110			40.2									

ELECTRON DENSITY

PUERTO RICO 60 W 25 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A	A	A	A
HMIN	280	270	239	239	210	230	240					
SCAT	41.2	37.6	46.2	33.9	44.4	33.5	40.4					
HMAXF	361	337	336	316	306	297	306					
SHMAX	480	407	435	346	355	243	203					
KM												
370	885											
360	885											
350	869											
340	834	834	697									
330	763	826	695									
320	671	780	676	735								
310	560	723	643	730	565		403					
300	381	629	591	692	562	548	401					
290	198	508	524	627	546	543	386					
280	40.2	335	446	540	513	513	358					
270		83.8	349	417	468	461	321					
260			240	262	417	377	272					
250			112	112	353	270	198					
240			12.4	12.4	286	151	60.0					
230					207	12.4						
220					112							
210					12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 25 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	P					A						
HMIN		100	100	100	110		109	240	219	220	259	290
SCAT		54.6	54.1	57.1	46.4		46.7	43.8	42.7	42.2	48.7	45.0
HMAXF		350	335	330	334		346	338	321	325	369	392
SHMAX		1895	1765	1652	1458		1398	1036	922	733	660	621
KM												
400												960
390												960
380												943
370											960	901
360		1771									952	834
350		1771					1569				924	754
340		1755	1815	1640	1567		1563	1697			875	648
330		1710	1812	1640	1568		1508	1684	1555	1143	806	540
320		1627	1783	1627	1518		1436	1627	1555	1139	716	417
310		1518	1722	1590	1450		1327	1522	1528	1108	619	297
300		1390	1627	1521	1341		1205	1376	1458	1040	508	170
290		1240	1503	1433	1220		1085	1193	1341	952	389	49.6
280		1094	1353	1320	1096		947	980	1185	848	262	
270		960	1189	1194	960		811	735	1004	728	143	
260		834	1016	1064	827		679	477	772	608	12.4	
250		716	834	929	694		553	262	523	467		
240		632	679	783	573		452	12.4	286	286		
230		561	551	643	480		371		127	161		
220		504	457	517	417		310		12.4	40.2		
210		456	400	433	370		264					
200		422	367	378	335		232					
190		391	348	343	314		205					
180		366	332	316	294		181					
170		341	320	294	272		160					
160		320	305	277	249		141					
150		294	278	264	224		123					
140		259	240	232	179		108					
130		225	208	193	156		94.7					
120		203	190	172	143		85.1					
110		177	173	155	12.4		12.4					
100		49.6	40.2	12.4								

ELECTRON DENSITY

PUERTO RICO 60 W 26 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL	S								C	A	A	
HMIN		220	209	242	259	239	240	109				100
SCAT		39.4	42.4	49.7	36.4	33.5	29.9	34.9				67.2
HMAXF		313	291	344	334	310	293	251				351
SHMAX		633	394	344	228	201	184	357				1333
KM												
360												982
350				516								982
340				515	461							976
330				504	460							957
320		1240		484	443	439						925
310		1233		455	410	439						886
300		1202	716	414	362	429	492					840
290		1143	716	362	293	399	491					790
280		1093	705	300	214	351	470					738
270		875	672	226	112	286	424					684
260		643	621	143	12.4	198	344	582				632
250		362	549	75.7		112	219	582				580
240		143	454			12.4	12.4	564				529
230		12.4	335					527				479
220			179					462				438
210			12.4					372				403
200								286				374
190								214				352
180								169				334
170								139				323
160								117				312
150								99.7				294
140								85.4				262
130								77.3				211
120								67.4				190
110								12.4				172
100												60.0

ELECTRON DENSITY

PUERTO RICO 60 W 26 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A	A	A	S	A	A	A				S	
HMIN					90			219	239	229		280
SCAT					55.3			52.0	49.1	52.2		41.4
HMAXF					337			363	351	365		370
SHMAX					1555			1063	931	846		601
KM												
380												1050
370								1367		1050		1050
360								1366	1393	1047		1033
350								1345	1393	1028		984
340					1555			1300	1377	986		907
330					1549			1227	1328	926		794
320					1518			1131	1248	857		667
310					1462			1013	1150	774		523
300					1377			875	1022	679		335
290					1272			716	859	588		161
280					1143			558	679	495		40.2
270					1004			427	477	405		
260					856			335	262	304		
250					726			258	112	213		
240					601			189	12.4	127		
230					499			123		12.4		
220					427			12.4				
210					376							
200					340							
190					316							
180					298							
170					281							
160					262							
150					236							
140					204							
130					178							
120					165							
110					138							
100					12.4							

ELECTRON DENSITY

PUERTO RICO 60 W 27 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL									A	A	A	A
HMIN	250	229	260	260	219	229	270	210				
SCAT	31.0	40.2	49.6	38.7	39.0	49.4	41.9	43.8				
HMAXF	314	315	362	342	304	324	340	305				
SHMAX	486	467	478	419	363	343	284	449				
KM												
370			707									
360			706									
350			696	794			557					
340			669	793			557					
330			630	773		524	549					
320	1167	854	577	727		523	525					
310	1162	851	508	654	697	513	489	726				
300	1107	824	429	557	696	491	430	723				
290	990	768	335	438	674	462	350	700				
280	807	690	247	301	633	417	219	662				
270	573	585	133	127	565	362	12.4	608				
260	310	466	12.4	12.4	477	299		540				
250	49.6	310			362	225		455				
240		143			198	143		362				
230		12.4			88.8	12.4		262				
220					12.4			143				
210								12.4				

ELECTRON DENSITY

PUERTO RICO 60 W 27 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL			B				A			S		
HMIN	100	100		100	100	100		210	239		250	280
SCAT	48.7	51.0		59.3	51.9	48.0		52.8	47.5		41.7	39.4
HMAXF	320	331		329	321	304		333	349		347	358
SHMAX	1555	1603		1777	1580	1386		909	812		681	561
KM												
360												1016
350									1240		1143	1004
340		1619						1143	1229		1134	960
330	1569	1611		1727	1697			1142	1150		1096	886
320	1562	1591		1717	1697			1126	1123		1021	794
310	1549	1537		1683	1679	1697		1089	1030		917	679
300	1480	1460		1621	1621	1695		1031	898		794	540
290	1395	1341		1555	1555	1660		955	754		662	362
280	1291	1200		1436	1436	1581		865	598		492	97.2
270	1182	1041		1302	1292	1480		773	417		286	
260	1066	894		1163	1143	1341		679	240		127	
250	939	754		1015	978	1192		573	112		12.4	
240	814	636		866	807	1022		477	12.4			
230	697	540		716	661	817		362				
220	595	469		581	540	625		219				
210	512	423		477	446	477		60.0				
200	452	392		408	389	371						
190	401	374		371	350	307						
180	375	356		348	321	271						
170	348	338		330	296	244						
160	328	319		313	272	219						
150	314	298		290	250	195						
140	286	273		262	229	170						
130	252	243		235	198	143						
120	213	217		212	166	124						
110	191	203		186	150	116						
100	83.8	143		49.6	49.6	83.8						

ELECTRON DENSITY

PUERTO RICO 60 W 28 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
OUAL		F						B				A
HMIN	269		230	240	239	239	259	220	109	100	100	
SCAT	38.1		35.3	47.8	42.2	38.5	38.7	41.9	48.7	45.2	58.7	
HMAXF	358		306	323	339	323	340	298	304	290	330	
SHMAX	545		522	514	399	334	352	426	956	952	1424	
KM												
360	1036											
350	1025						652					
340	973				661		652				1316	
330	895			854	653	634	640				1316	
320	781			853	624	633	604				1305	
310	627		1050	837	580	615	553		1096		1276	
300	446		1041	802	521	576	487	814	1094	1119	1225	
290	262		990	754	446	516	405	807	1073	1119	1153	
280	127		900	679	366	432	304	774	1024	1105	1072	
270	12.4		780	573	271	335	186	723	960	1057	978	
260			629	446	161	219	12.4	650	875	991	875	
250			446	286	75.2	103		531	780	903	774	
240			240	49.6	12.4	12.4		349	671	794	679	
230			49.6					188	564	666	581	
220								12.4	467	540	503	
210									384	452	443	
200									324	386	397	
190									277	338	362	
180									240	302	335	
170									208	275	307	
160									183	248	275	
150									161	219	237	
140									143	190	202	
130									119	166	179	
120									98.7	149	171	
110									12.4	127	163	
100										12.4	49.6	

ELECTRON DENSITY

PUERTO RICO 60 W 28 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
OUAL			B				A	S				
HMIN	97	100		100	110	100			230	199	260	300
SCAT	53.2	50.0		48.3	51.2	54.2			43.4	56.7	44.4	33.7
HMAXF	358	340		325	332	341			326	330	361	388
SHMAX	1742	1801		1714	1628	1703			1003	1138	738	608
KM												
390												1119
380												1104
370											1143	1033
360	1626										1143	934
350	1618	1876				1786					1125	819
340	1582	1876			1786	1785				1473	1076	694
330	1506	1856		1907	1785	1767			1669	1473	1004	555
320	1409	1790		1902	1762	1717			1661	1461	903	401
310	1293	1690		1862	1704	1632			1612	1427	794	198
300	1151	1560		1786	1602	1518			1513	1369	679	49.6
290	1017	1408		1648	1478	1382			1372	1284	533	
280	886	1240		1490	1328	1240			1206	1183	362	
270	768	1059		1312	1173	1060			1004	1057	179	
260	660	894		1131	1004	891			754	902	12.4	
250	573	741		937	834	735			477	733		
240	502	618		754	670	608			240	553		
230	459	523		608	540	508			40.2	362		
220	412	452		500	446	417				186		
210	384	402		431	378	357				92.1		
200	363	366		385	335	315				12.4		
190	351	340		357	304	283						
180	340	321		339	283	260						
170	326	306		323	266	237						
160	312	293		308	240	216						
150	290	278		280	210	193						
140	258	259		244	179	171						
130	213	226		212	156	151						
120	201	195		191	143	136						
110	112	171		170	12.4	116						
100	12.4	12.4		40.2		12.4						

ELECTRON DENSITY

PUERTO RICO 60 W 29 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A		A	
HMIN	300	270	249	249	289	239	200			99		100
SCAT	37.0	39.3	42.2	44.8	45.6	34.5	41.6			70.5		74.9
HMAXF	392	358	352	352	409	323	288			334		370
SHMAX	624	677	696	745	721	701	647			1078		1901
KM												
410					1084							
400	1131				1083							
390	1130				1062							
380	1102				1014							1446
370	1028				940							1446
360	928	1240	1191	1215	845							1440
350	794	1227	1190	1215	735							1421
340	657	1175	1168	1195	608					814		1389
330	477	1083	1110	1143	477	1473				813		1344
320	310	951	1022	1063	335	1471				806		1278
310	14[illegible]	794	894	949	206	1416				789		1208
300	12.4	609	739	805	93.1	1309				761		1131
290		362	573	643	12.4	1143	1131			729		1035
280		143	362	446		917	1120			692		935
270		12.4	188	249		643	1074			654		834
260			83.8	112		349	999			614		747
250			12.4	12.4		112	898			573		660
240						12.4	776			533		586
230							621			496		527
220							417			463		479
210							198			432		439
200							12.4			400		405
190										366		378
180										329		354
170										292		329
160										257		300
150										224		265
140										193		225
130										163		198
120										147		188
110										131		173
100										12.4		49.6

ELECTRON DENSITY

PUERTO RICO 60 W 29 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL		A	A		A	A	A					
HMIN	100							230	210	289	320	289
SCAT	55.6							43.5	43.4	[illegible]3	45.2	42.[illegible]
HMAXF	352							320	336	408	413	387
SHMAX	1698							737	5[illegible]2	627	567	563
KM												
420											885	
410										834	884	
400										829	862	
390										803	823	949
380										771	764	943
370										721	688	912
360	1556									656	594	865
350	1556									582	493	769
340	1537								774	508	389	661
330	1493							1215	770	424	262	532
320	1421							1215	744	335	89.8	398
310	132							1198	697	225		255
300	1216							1149	639	119		127
290	1080							1067	573	12.4		12.4
280	953							960	494			
270	827							834	408			
260	716							679	322			
250	604							508	235			
240	527							286	148			
230	464							60.0	77.6			
220	417								12.4			
210	386											
200	363											
190	353											
180	345											
170	336											
160	318											
150	294											
140	260											
130	224											
120	194											
110	170											
100	49.6											

ELECTRON DENSITY

PUERTO RICO 60 W 30 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL								A	A	A	A	A
HMIN	220	280	259	260	320	329	320					
SCAT	40.5	33.5	33.7	44.1	35.5	52.1	36.8					
HMAXF	326	361	337	351	388	426	389					
SHMAX	531	336	365	346	289	435	365					
KM												
430						643						
420						641						
410						627						
400						601						
390					596	564	735					
380					582	516	723					
370		645			556	457	682					
360		645		557	504	389	617					
350		619		557	431	302	535					
340		573	774	548	349	161	446					
330	960	517	765	522	251	12.4	298					
320	956	446	722	484	60.0		49.6					
310	925	367	649	437								
300	865	278	540	381								
290	775	179	417	319								
280	654	12.4	262	248								
270	508		127	168								
260	324		12.4	12.4								
250	161											
240	71.4											
230	12.4											

ELECTRON DENSITY

PUERTO RICO 60 W 30 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A			A	A	A	A					
HMIN		100						250	239	290	330	288
SCAT		81.1						44.5	49.0	0.3	45.5	50.6
HMAXF		307						332	343	386	418	412
SHMAX		69						378	402	335	294	406
KM												
420											477	565
410											473	565
400											458	557
390										492	431	537
380										491	394	508
370										481	345	467
360										458	290	413
350									608	429	227	353
340								661	607	393	161	286
330								660	567	346	12.4	219
320								649	573	292		151
310		477						619	540	233		97.5
300		476						573	431	161		54.1
290		471						512	430	40.2		12.4
280		463						429	358			
270		451						325	273			
260		432						188	179			
250		411						12.4	78.8			
240		382							12.4			
230		366										
220		347										
210		330										
200		316										
190		306										
180		299										
170		292										
160		286										
150		268										
140		247										
130		217										
120		198										
110		183										
100		40.6										

ELECTRON DENSITY

PUERTO RICO 60 W 31 JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
QUAL			A					A	A	A		
HMIN	320	280	260	240	240	289	289				100	100
SCAT	45.1	43.7	48.1	40.7	49.5	53.6	58.3				105	81.4
HMAXF	421	367	347	330	336	388	407				308	318
SHMAX	357	377	349	282	279	259	262				593	701
KM												
430	557											
420	557											
410	548						335					
400	523						334					
390	486					375	328					
380	440					373	318					
370	377	634				364	301					
360	314	630				348	281					
350	260	611	557			330	255					
340	170	573	554	492	410	300	224					
330	97.2	523	539	492	408	259	185					
320	12.4	456	511	485	390	211	143					469
310		376	473	462	381	161	105				389	468
300		286	425	426	357	100	71.4				388	463
290		185	365	375	322	12.4	12.4				386	455
280		40.6	286	310	276						382	441
270			189	245	224						376	423
260			12.4	172	172						369	402
250				97.2	112						359	381
240				12.4	12.4						345	361
230											331	344
220											315	330
210											300	318
200											287	307
190											278	296
180											269	286
170											260	277
160											247	268
150											228	251
140											194	221
130											166	188
120											154	171
110											144	156
100											40.2	40.2

ELECTRON DENSITY

PUERTO RICO 60 W 31 JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
QUAL	A				A		A					
HMIN	100	100	100	110		110		260	259	270	300	289
SCAT	87.5	67.7	61.2	70.3		46.9		48.2	48.4	41.0	43.2	39.5
HMAXF	330	317	303	316		303		345	382	356	384	384
SHMAX	743	732	713	682		544		338	453	381	334	301
KM												
390									645		565	524
380									644		564	523
370									630		550	508
360									609	670	518	477
350								548	573	666	477	428
340	477							547	525	643	417	362
330	477							533	463	598	349	291
320	475	516		508				509	396	540	274	224
310	471	515	570	507		516		477	323	458	198	161
300	463	508	570	501		515		431	248	362	49.6	89.8
290	452	490	564	491		503		375	161	270		12.4
280	436	472	550	474		478		300	103	171		
270	417	448	525	450		446		198	60.0	40.2		
260	395	423	494	422		408		40.2	12.4			
250	374	398	460	395		369						
240	355	375	425	370		331						
230	337	356	389	348		300						
220	324	337	360	329		276						
210	310	325	335	312		258						
200	304	313	317	302		244						
190	298	305	305	292		231						
180	292	299	297	281		217						
170	286	293	289	269		198						
160	269	286	275	249		179						
150	247	267	254	223		157						
140	215	238	230	198		137						
130	186	211	206	174		123						
120	171	190	186	159		113						
110	161	154	165	40.2		40.2						
100	12.4	12.4	40.2									

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — JULY 1960

TIME	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100
COUNT	27	27	26	27	27	25	26	19	14	17	13	13
HMIN	264	244	231	241	247	237	240	125	108	105	106	105
RATIO	5.5	5.7	5.4	5.1	5.4	5.3	5.3	4.3	3.6	3.5	3.2	3.1
SCAT	47.4	46.9	49.8	51.4	49.4	50.5	54.5	58.1	74.2	68.0	78.7	73.0
NMAX	1015	1026	835	707	642	585	566	715	986	1028	1085	1144
HMAXF	373	347	339	355	356	346	351	309	324	318	338	350
SHMAX	653	634	542	491	424	391	401	664	1102	1192	1377	1495
SHINF	3517	3529	2897	2484	2233	2041	1999	2679	3884	4090	4437	4723
KM												
950	92.[illegible]	82.2	64.5	59.7	54.8	46.8	46.7	48.8	72.1	74.3	85.3	96.5
900	11[illegible]	105	82.6	76.6	70.2	60.0	59.9	62.6	92.5	95.3	109	124
850	153	135	106	98.2	90.0	76.9	76.7	80.3	119	122	140	159
800	196	173	136	126	115	98.5	98.3	103	152	157	180	203
750	250	223	174	161	147	126	126	132	195	201	230	260
700	318	283	222	205	188	161	160	168	249	256	293	331
650	404	360	282	261	239	205	204	215	317	326	373	421
600	508	454	357	328	301	258	257	272	401	414	472	531
550	630	568	447	409	374	323	320	343	504	519	591	663
500	764	698	550	500	457	396	392	427	624	643	728	811
490	792	725	572	519	474	412	407	445	650	670	757	842
480	818	753	594	538	490	427	422	463	676	697	786	873
470	845	780	616	556	507	443	437	482	702	724	815	904
460	870	807	638	574	524	458	451	501	728	752	844	934
450	894	834	660	592	539	473	465	520	755	779	873	963
440	917	860	681	609	555	488	479	539	781	806	901	992
430	938	886	702	626	569	502	492	557	807	833	928	1019
420	957	909	722	641	582	516	504	576	832	859	954	1044
410	973	932	740	654	594	528	515	594	856	884	979	1067
400	985	952	758	666	604	540	525	612	879	908	1001	1087
390	992	970	773	674	611	549	533	628	900	930	1022	1105
380	992	984	785	680	615	556	539	644	920	950	1039	1118
370	981	995	797	682	613	560	543	658	937	968	1053	1127
360	959	1000	804	679	606	562	543	671	951	983	1064	1131
350	921	997	807	672	591	559	539	682	961	994	1070	1127
340	865	983	802	656	570	552	532	690	968	1002	1070	1116
330	787	956	790	630	541	539	519	695	970	1004	1064	1095
320	687	911	767	593	500	518	500	696	967	1001	1052	1063
310	576	848	730	546	455	486	472	693	957	991	1029	1020
300	452	761	679	485	404	451	436	685	939	972	995	966
290	323	649	613	417	343	405	390	671	913	947	953	904
280	206	518	531	341	280	348	330	647	878	914	903	836
270	118	384	434	259	217	281	253	614	835	872	844	766
260	60.4	257	332	177	154	209	178	572	780	821	778	694
250	24.1	146	242	111	98.3	137	117	519	714	763	711	625
240	8.5	65.6	162	59.2	54.0	80.8	73.1	455	638	696	640	561
230	1.2	22.1	92.1	30.0	28.2	38.5	47.8	387	557	623	573	505
220		9.1	44.8	17.2	12.9	21.8	26.0	311	477	549	514	461
210		3.3	11.8	10.3	4.2	10.4	9.7	253	407	479	462	426
200		.5	2.4	2.6	.5	3.4	1.0	211	350	418	418	398
190			.5	.5				177	304	368	382	375
180								148	263	327	349	355
170								125	226	292	319	335
160								105	193	259	288	313
150								89.6	163	226	255	285
140								78.4	140	195	221	249
130								71.1	125	169	188	212
120								65.5	115	153	171	188
110								36.3	64.6	120	125	141
100								2.8	1.8	11.7	10.0	26.5

AVERAGE ELECTRON DENSITY — KP BELOW 4.5

PUERTO RICO — 60 W — JULY 1960

TIME	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
COUNT	17	21	12	21	18	13	10	24	23	23	24	29
HMIN	106	105	107	107	106	107	109	229	232	244	264	274
RATIO	3.3	3.3	3.5	3.6	3.8	3.9	4.0	4.8	4.9	4.9	5.1	5.2
SCAT	69.8	68.4	63.6	63.4	56.7	58.6	59.5	54.5	53.2	53.0	51.0	49.6
NMAX	1306	1381	1574	1568	1615	1495	1280	1170	1212	1050	1009	991
HMAXF	346	349	350	342	334	333	332	352	357	374	385	390
SHMAX	1568	1647	1765	1682	1591	1473	1228	884	885	795	725	690
SHINF	5252	5543	6206	6104	6148	5691	4840	4184	4303	3758	3571	3485
KM												
950	108	115	130	124	123	114	97.7	96.9	103	97.3	99.3	99.2
900	138	148	167	160	158	146	125	124	132	125	127	127
850	178	190	214	205	202	187	161	159	169	160	163	163
800	227	243	275	262	259	240	206	204	217	205	209	209
750	291	311	351	335	331	307	263	261	277	262	267	266
700	371	396	449	428	423	392	336	333	353	333	340	339
650	471	504	570	545	539	499	428	424	449	422	430	429
600	595	636	720	689	682	632	542	535	566	531	539	537
550	743	793	899	862	856	793	680	668	706	658	665	663
500	910	972	1103	1061	1058	979	840	819	863	797	800	796
490	945	1009	1146	1103	1101	1019	874	851	896	825	827	822
480	980	1046	1189	1145	1145	1059	909	882	929	853	853	847
470	1014	1083	1231	1187	1189	1099	943	914	961	880	878	871
460	1049	1119	1273	1230	1232	1139	978	945	993	906	902	894
450	1082	1155	1315	1271	1276	1180	1012	975	1024	931	924	916
440	1115	1189	1355	1312	1319	1219	1046	1005	1054	954	944	935
430	1146	1223	1393	1351	1361	1258	1080	1033	1082	975	962	952
420	1175	1253	1429	1389	1402	1295	1112	1060	1108	993	976	965
410	1202	1281	1463	1424	1441	1331	1142	1084	1132	1009	988	975
400	1226	1306	1493	1457	1477	1364	1171	1106	1153	1022	994	979
390	1247	1327	1519	1486	1511	1395	1197	1125	1171	1029	994	977
380	1264	1344	1540	1510	1541	1422	1220	1141	1184	1029	984	964
370	1277	1356	1555	1530	1566	1445	1240	1151	1191	1018	962	935
360	1284	1361	1564	1544	1586	1463	1255	1156	1189	995	922	889
350	1283	1359	1563	1551	1600	1475	1266	1152	1176	960	864	826
340	1273	1345	1546	1548	1606	1479	1269	1136	1149	910	787	743
330	1251	1317	1514	1533	1599	1471	1260	1105	1104	843	693	643
320	1214	1277	1460	1502	1571	1449	1239	1058	1039	762	581	529
310	1165	1221	1387	1450	1521	1408	1202	992	957	664	455	400
300	1101	1149	1294	1374	1447	1349	1150	906	856	548	342	261
290	1025	1063	1186	1277	1351	1269	1086	803	734	443	242	146
280	941	967	1069	1157	1235	1168	1005	683	597	350	160	77.5
270	847	865	947	1027	1097	1048	909	542	457	262	97.9	38.5
260	754	764	823	893	943	917	804	387	318	190	53.2	14.9
250	666	667	707	760	799	787	685	253	205	126	24.7	5.1
240	585	582	603	641	660	660	568	142	114	60.7	9.6	.7
230	518	512	521	541	544	544	457	72.2	52.9	30.3	3.2	
220	465	458	459	466	457	447	365	31.9	19.9	12.1	1.3	
210	424	418	415	414	396	373	294	13.0	4.2	3.1		
200	395	388	384	379	355	321	242	5.0	.5	.5		
190	372	367	361	353	327	284	205	1.0				
180	352	348	341	332	305	256	175					
170	334	330	322	311	283	230	150					
160	314	309	300	288	258	205	128					
150	291	283	271	262	230	181	110					
140	258	255	237	231	197	156	96.8					
130	222	226	211	203	174	137	87.3					
120	196	204	194	181	159	125	79.5					
110	126	143	116	120	105	78.6	19.9					
100	16.2	28.0	6.7	5.5	10.3	11.4						

TABLES OF IONOSPHERIC DATA

JUNE 1960 - MAY 1957

Table 1

Huancayo, Peru (12.0° S, 75.3° W) — June 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs*	(M3000)F2
00		7.4	25	235					3.10
01		7.25	26	240					3.15
02		6.35	28	240					3.10
03		5.9	29	240					3.15
04		5.0	28	250					3.15
05		4.5	24	260					3.10
06		4.4	27	290		---	----	1.9	2.95
07		7.2	27	260		121	(2.35)	7.1	3.00
08		9.3	30	240		113	(2.98)	9.2	2.85
09		10.1	30	225		---	(3.40)	11.2	2.60
10		9.8	30	215		---	(3.55)	16.6	2.50
11	---	9.75	30	210	---	---	(3.85)	17.0	2.45
12		9.5	30	200		---	(3.90)	17.1	2.40
13		9.3	30	200		---	(3.85)	17.0	2.35
14		9.4	30	205		---	(3.65)	17.0	2.35
15		9.5	30	220		---	(3.40)	13.5	2.35
16		9.55	30	235		113	(3.00)	10.6	2.40
17		9.45	30	260		111	(2.45)	9.0	2.45
18		8.7	30	300		---	(1.28)	2.0	2.40
19		8.2	30	330					2.40
20		8.3	27	310					2.40
21		8.25	26	270					2.60
22		7.8	26	245					2.90
23		7.7	25	240					3.00

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.
*Beginning June 10, high-gain antenna used.

Table 2

Talara, Peru (4.6° S, 81.3° W) — May 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.4	27	220					2.92
01		9.2	27	235					3.00
02		9.4	31	235					3.10
03		8.0	29	230					3.25
04		6.4	30	235					3.10
05		5.2	29	250					2.95
06		4.8	29	270					2.85
07		7.2	29	255		125	2.25		2.95
08		8.7	29	240		117	3.00		2.90
09		9.8	28	230		115	3.42		2.60
10	---	10.4	27	220		112	(3.70)	4.0	2.35
11	---	10.55	30	215	---	111	3.85	4.0	2.25
12	---	10.6	31	210		111	(3.95)	4.1	2.20
13	---	11.0	29	210		109	3.92	4.0	2.15
14	---	11.0	31	(210)		110	3.78	4.0	2.20
15	---	11.1	31	<210		109	3.50	4.7	2.20
16		11.3	31	(225)		109	3.20	4.3	2.25
17		11.0	31	(245)		115	2.80	4.3	2.25
18		10.7	31	270		(145)	1.95	4.4	(2.25)
19		>10.4	31	320				2.3	2.30
20		(10.2)	31	345				2.3	(2.35)
21		(10.45)	30	310				2.1	2.60
22		11.4	26	250				2.2	2.85
23		10.9	26	220					3.10

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 3

Resolute Bay, Canada (74.7° N, 94.9° W) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.5	25	280		125	1.45		2.60
01		5.2	26	290		135	1.40		2.50
02		5.2	27	290		120	1.50		2.55
03		5.1	25	290		120	1.65		2.60
04		5.5	25	290		110	1.80		2.65
05	---	5.2	24	200	---	110	2.00		2.60
06	(410)	5.5	24	270	3.6	110	2.30		2.60
07	425	5.6	24	265	3.9	105	2.50		2.60
08	400	5.4	23	250	4.0	100	2.60		2.55
09	415	5.1	22	240	4.0	100	2.00		2.50
10	400	5.6	22	235	4.3	100	3.00		2.30
11	400	5.0	23	230	4.2	100	3.00		2.40
12	490	5.0	23	230	4.2	100	3.00		2.25
13	450	5.5	23	230	4.3	100	3.00		2.40
14	440	5.7	23	240	4.1	100	3.00		2.50
15	400	5.0	22	230	4.2	100	3.00		2.45
16	420	5.8	24	235	4.2	100	2.80		2.50
17	410	5.0	25	250	3.9	100	2.60		2.40
18	(405)	5.9	25	260	3.7	110	2.40		2.50
19	---	5.9	26	200	---	110	2.30		2.55
20		6.0	26	290		115	2.00		2.65
21		5.0	26	295		100	1.75		2.60
22		5.4	24	290		110	1.60		2.60
23		5.5	24	290		110	1.40		2.60

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 4

Point Barrow, Alaska (71.3° N, 156.8° W) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.7	19					5.1	2.70
01		4.7	21					4.7	2.60
02		4.7	19					4.5	2.65
03		4.8	19					3.1	2.70
04		4.5	19					2.5	2.65
05		4.6	20						2.60
06		4.8	17						2.55
07		4.9	17						2.50
08		4.6	15						2.25
09		4.65	14						2.38
10		5.1	13						2.50
11		5.3	17						2.40
12		5.55	14						2.50
13		5.5	19						2.55
14		5.7	21						2.55
15		5.9	21						2.60
16		6.15	20						2.60
17		5.7	23						2.65
18		5.55	22						2.00
19		5.0	22						2.80
20		4.75	22					3.6	2.85
21		4.95	22					4.8	2.85
22		4.7	23					4.3	2.72
23		4.9	18					4.6	2.70

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 5

Tromso, Norway (69.7° N, 19.0° E) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.3)	5	(345)		---	----	3.1	----
01		(5.2)	5	(355)		---	----	3.2	----
02		(5.2)	4	---		---	----	3.0	----
03		(5.5)	5	---		---	----	3.2	----
04		(5.8)	6	(290)		---	----	3.1	----
05	---	(5.9)	9	---		---	----		(2.70)
06	---	6.6	10	---		---	----		----
07	---	7.4	11	(250)	- --	115	2.75		(2.55)
08	---	(8.0)	9	(250)	----	110	3.00		----
09	(445)	8.6	14	(240)	----	110	3.10		2.70
10	(475)	7.2	19	245	4.40	110	3.15		2.70
11	(395)	8.8	21	240	4.45	110	3.15		2.70
12	(445)	8.7	24	240	4.45	110	3.20		2.65
13	(420)	9.0	22	240	4.60	110	3.15		2.70
14	(370)	8.1	22	245	----	110	3.10		2.70
15	---	7.6	20	250	----	110	3.00		(2.70)
16	---	7.4	21	250	----	110	2.85		2.90
17	---	6.8	22	255		110	2.70		2.90
18	(260)	6.8	18	280		110	2.40		2.90
19	(250)	5.8	20	(295)		115	2.10	3.0	2.80
20		5.5	14	(300)		---	----	3.7	(2.60)
21		4.8	16	330		---	----	3.6	(2.40)
22		5.1	11	305		---	----	3.0	(2.40)
23		(5.0)	11	(345)				2.6	(2.40)

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 6

Kiruna, Sweden (67.8° N, 20.3° E) — April 1960

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.0)	9	370				4.0	(2.5)
01		(4.9)	7	(345)				4.8	(2.5)
02		4.4	11	360				4.8	(2.5)
03		4.8	10	(320)		---	---	3.6	2.55
04		5.0	15	300		---	---		2.6
05		5.4	13	260		---	---		2.7
06	---	6.2	12	250	---	110	2.5		2.7
07	(455)	5.7	19	250	3.8	110	2.8		2.75
08	450	5.5	21	250	4.1	110	2.9		2.7
09	470	6.4	24	250	4.4	110	3.0		2.6
10	(340)	6.8	22	240	4.6	110	3.0		2.7
11	400	7.3	24	235	4.6	110	3.1		2.7
12	390	7.8	24	235	4.6	110	3.1		2.7
13	340	7.8	24	230	4.6	110	3.1		2.7
14	340	8.0	25	240	4.6	110	3.0		2.8
15	(340)	7.2	26	245	4.4	115	2.9		2.8
16	(295)	7.3	24	250	4.0	110	2.8		2.8
17	---	6.8	24	260	---	120	2.6		2.8
18		6.8	22	275		120	2.2		2.8
19		5.4	21	285		---	---	2.8	2.8
20		5.6	18	300		---	1.4	2.8	2.7
21		4.8	20	345		---	---	4.0	2.5
22		5.3	11	340				5.4	(2.6)
23		(5.2)	8	340				4.1	(2.6)

Time: 15.0°E.
Sweep: 0.8 Mc to 15.0 Mc in 30 seconds.

Table 7

Sodankyla, Finland (67.4° N, 26.6° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(6.8)	3	350				(3.7)	----
01		(6.7)	3	380				(3.7)	----
02		(6.0)	2	395				(3.8)	----
03		(6.7)	3	375				(3.5)	----
04		(5.7)	6	330		---	E	(3.6)	(2.70)
05		(5.3)	9	295		---	E	(3.3)	(2.70)
06		6.0	14	275	---	125	2.30	(3.2)	2.80
07		6.1	11	250	---	120	2.60	(3.2)	2.70
08		5.5	18	250	---	120	2.90		2.75
09		5.9	22	250	4.3	115	2.95		2.75
10		6.8	24	240	4.4	115	3.15		2.75
11		6.8	22	230	4.4	115	3.20		2.70
12		7.6	21	230	4.6	110	3.30		2.70
13		8.1	23	225	---	115	3.30		2.75
14		8.1	24	225	---	115	3.15		2.75
15		8.5	23	235	---	115	3.05		2.80
16		7.6	22	240	---	115	2.95		2.80
17		7.8	19	250		115	2.80	(2.8)	2.85
18		7.4	18	260		120	2.50	(3.4)	2.85
19		7.3	18	270		120	2.20	(3.4)	2.85
20		6.8	10	270		---	E	(3.3)	2.85
21		(7.6)	5	310		---	E	(3.1)	(2.75)
22		(7.6)	5	340		---	----	(3.8)	(2.80)
23		(6.6)	2	355				(4.1)	----

Time: 30.0°E.
Sweep: 1.4 Mc to 22.0 Mc in 8 minutes, automatic operation.

Table 8

Lulea, Sweden (65.6° N, 22.1° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.9	12	330					2.5
01		4.5	14	370					2.5
02		4.0	14	355					2.6
03		4.4	12	340					2.6
04		4.8	12	300		---	---		2.7
05	---	5.0	13	260	---	140	2.3		2.85
06	---	6.8	13	250	---	130	2.6		2.8
07	---	7.0	16	245	---	120	2.8		2.9
08	(405)	6.4	19	250	4.2	120	3.0		2.8
09	(370)	7.5	20	250	4.4	---	3.2		2.8
10	(360)	8.4	20	245	4.6	115	3.2		2.8
11	(400)	7.6	23	240	4.6	110	3.3		2.75
12	(405)	8.2	21	240	4.6	110	3.4		2.8
13	(370)	9.2	18	235	---	110	3.3		2.8
14	(360)	8.4	21	240	4.4	115	3.1		2.8
15	---	8.0	20	240	---	115	3.1		2.8
16	---	8.0	17	250	---	115	2.9		2.9
17	---	7.0	19	250		125	2.4		2.9
18	---	7.1	22	260		140	2.2		2.9
19	---	6.5	21	260		---	2.0		2.9
20		5.8	16	280		---	---		2.9
21		4.8	16	290					2.7
22		4.5	12	315				2.2	2.6
23		5.0	12	320				2.2	2.6

Time: 15.0°E.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 9

Lycksele, Sweden (64.6° N, 18.8° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		>4.5	22	340				3.0	2.4
01		4.5	21	345				2.3	2.4
02		4.4	20	350				2.3	2.4
03		4.1	17	340		---	----	2.8	2.4
04		4.4	17	300		120	1.60	2.7	2.5
05	---	4.8	17	260	----	120	2.00	2.3	2.6
06	(450)	5.0	21	250	3.80	110	2.35		2.6
07	450	5.2	25	240	3.85	110	2.70		2.5
08	450	5.6	25	235	4.30	105	2.85		2.5
09	340	6.3	23	235	4.60	105	3.05		2.65
10	360	6.8	23	225	4.70	105	3.20		2.6
11	355	7.5	23	230	4.80	105	3.30		2.6
12	380	6.9	26	230	4.90	105	3.30		2.7
13	355	7.2	25	225	4.80	105	3.30		2.6
14	320	7.5	25	230	4.70	105	3.10		2.6
15	335	7.8	25	235	4.50	105	3.00		2.7
16	310	7.5	25	240	4.20	105	2.75		2.75
17	---	7.2	24	250	----	110	2.45	2.4	2.75
18		6.8	25	260		115	2.10	2.7	2.8
19		6.0	25	260		130	1.75	2.6	2.7
20		5.7	23	260		125	1.40	3.0	2.7
21		5.0	23	290		---	----	2.4	2.6
22		4.7	19	310		---	----	4.0	2.5
23		5.2	16	315		---	----	3.7	2.4

Time: 15.0°E.
Sweep: 0.33 Mc to 20.0 Mc in 3 minutes.
Occasionally, 1.4 Mc to 16.0 Mc in 6 minutes, automatic operation.

Table 10

Anchorage, Alaska (61.2° N, 149.9° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(3.5)	20					2.5	(2.50)
01		(3.8)	19					2.2	(2.52)
02		(3.8)	19					2.4	(2.45)
03		(3.85)	16					2.2	(2.50)
04		(4.0)	19			---	----	1.6	(2.55)
05		(4.5)	19		---	134	(1.90)		(2.50)
06		(5.0)	21		3.4	116	2.30		(2.50)
07		4.9	21		3.8	111	(2.70)		2.45
08		5.0	17		4.0	111	2.88		2.40
09		5.15	20		4.3	113	(3.15)		2.35
10		5.3	20		4.2	107	3.20		(2.45)
11		5.35	16		4.6	109	3.30		2.45
12		5.9	12		4.5	107	(3.30)		2.60
13		5.75	22		4.5	109	3.35		(2.48)
14		5.8	20		4.6	111	3.30		2.70
15		6.2	21		4.4	111	3.10		2.72
16		6.5	20		(4.1)	110	2.90		2.75
17		6.4	21		---	115	2.62		2.88
18		6.6	21		---	121	2.30		2.95
19		5.6	21		---	136	1.90		2.90
20		5.3	20						2.82
21		4.2	19						2.80
22		3.75	18					2.0	2.68
23		(3.5)	16					2.1	(2.60)

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 11

Nurmijarvi, Finland (60.5° N, 24.6° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.6)	8						(2.60)
01		(5.0)	8						(2.60)
02		(4.5)	9						(2.60)
03		(4.6)	6						(2.70)
04		(3.6)	8						(2.60)
05		(4.9)	7						(2.70)
06		(5.2)	8						(2.80)
07		5.9	20						2.90
08		6.2	20		---				2.90
09		7.8	21		---				2.80
10		7.8	19		---				2.85
11		8.7	20		4.7				2.90
12		7.8	22		4.8				2.80
13		8.4	24		---				2.85
14		7.9	27		---				2.90
15		7.9	26						2.90
16		8.0	26						2.90
17		8.2	26						2.95
18		8.0	25				---		2.95
19		7.8	22						2.95
20		8.2	17						2.95
21		6.0	15						2.80
22		6.4	12						2.80
23		(5.8)	8						(2.65)

Time: 30.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 1 minute.

Table 12

Churchill, Canada (58.8° N, 94.2° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	23	300				4.6	----
01		4.9	22	300				4.0	----
02		4.8	20	315		---	----	3.0	----
03		4.2	20	325		---	----	3.0	
04		4.1	19	355		---	----	3.0	----
05		4.2	22	325		---	2.30	2.8	----
06	---	4.8	19	300	---	110	2.80	3.0	(2.90)
07	(400)	5.0	18	275	4.0	110	2.90		(2.85)
08	515	5.4	16	260	4.2	105	3.10		(2.50)
09	410	5.8	19	260	4.5	105	3.30		2.70
10	490	6.2	20	240	4.8	105	3.40		2.85
11	460	6.2	22	240	4.8	105	3.50		2.70
12	490	6.7	23	230	4.8	105	3.50		2.65
13	415	7.4	21	225	4.8	105	3.40		2.70
14	400	8.0	21	220	4.8	105	3.40		2.65
15	410	6.9	22	230	4.6	105	3.20		2.65
16	375	6.7	21	235	4.5	105	3.05		2.80
17	400	6.8	24	250	4.1	110	2.90		2.80
18	(340)	6.6	24	280	3.9	110	2.85		2.85
19	---	6.2	24	295	---	120	2.30	3.0	(2.85)
20		5.7	24	300		---	----	4.0	----
21		5.0	25	320		---	----	5.4	
22		5.2	23	300				5.8	
23		4.8	24	310				5.8	(2.75)

Time: 90.0°W.
Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 13

Inverness, Scotland (57.4° N, 4.2° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.1	27	310				<1.2	2.40
01		4.3	24	300				1.0	2.45
02		4.2	22	310				(1.2)	2.45
03		3.4	24	305				<1.1	2.45
04		(3.2)	24	310				<1.2	2.45
05		3.9	26	300		130	1.60		2.65
06	---	4.5	27	260	---	120	2.20		2.80
07	---	5.2	20	250	---	115	2.60		2.80
08	(455)	5.4	27	250	4.0	110	2.90		2.75
09	520	5.0	20	240	4.4	110	3.15		2.70
10	440	6.4	27	240	4.6	110	3.30		2.70
11	440	6.6	27	230	4.7	110	3.40		2.70
12	410	6.0	26	235	4.8	110	3.50		2.70
13	450	7.1	27	240	4.7	110	3.50		2.70
14	420	7.0	27	240	4.8	110	3.40		2.70
15	(425)	7.4	27	240	---	110	3.30		2.75
16	(400)	7.9	27	250	---	110	3.10		2.75
17		8.1	27	250		110	2.00		2.00
18		7.8	27	250		120	2.50		2.85
19		6.7	27	255		<150	2.00		2.90
20		6.4	28	260		---	----	<1.7	2.80
21		5.4	28	260				<1.6	2.60
22		5.3	26	290				<1.6	2.60
23		4.8	22	300				<1.6	2.50

Time: 0.0°.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 14

De Bilt, Holland (52.1° N, 5.2° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		4.8	29	(310)					2.60
01		4.8	28	<315					2.65
02		4.7	28	(310)					2.60
03		4.3	27	<320					2.65
04		3.8	28	<310					2.65
05	---	4.4	26	275	---	---	2.0		2.90
06	(570)	5.2	28	250	3.4	120	2.3		3.10
07	480	5.4	28	245	4.0	110	2.8		3.00
08	425	6.0	28	230	4.7	110	3.1		2.90
09	370	7.0	28	220	4.8	110	3.5		2.90
10	390	7.4	29	220	5.0	110	3.7		3.00
11	335	7.8	20	220	5.0	110	3.8		2.95
12	310	8.2	28	220	5.0	110	3.8		3.00
13	320	8.4	28	235	4.9	110	3.7		2.95
14	315	8.0	30	225	4.9	110	3.5		3.00
15	(320)	7.8	27	230	4.7	110	3.3		3.05
16	---	8.6	28	240		110	3.0		3.05
17	(290)	8.3	26	250		115	2.6		3.10
18		(8.4)	21	250		---	2.0		3.10
19		7.4	20	250		---	---		3.00
20		(6.5)	25	250					2.95
21		5.9	25	<270					2.90
22		5.4	29	<300					2.75
23		5.0	29	(300)					2.65

Time: 0.0°.
Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 15

Adak, Alaska (51.9° N, 176.6° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.25	28	300					2.65
01		4.0	27	325					2.60
02		3.8	25	325					2.60
03		3.6	25	330					2.55
04	---	3.6	27	335	---	---	----		2.60
05	(600)	4.2	29	300	3.0	130	1.70	1.8	2.60
06	(520)	5.4	28	260	3.6	113	2.30	2.5	2.72
07	455	5.9	29	245	4.0	106	2.80	3.0	2.70
08	460	6.2	29	(230)	4.3	102	3.10	3.4	2.65
09	480	6.5	29	(225)	4.5	103	3.30	3.7	2.72
10	410	7.2	29	220	4.7	103	3.45	3.9	2.80
11	425	7.55	28	220	4.8	103	3.50	3.7	2.80
12	440	7.9	30	220	4.7	102	3.55	3.8	2.80
13	<460	8.3	30	220	4.8	104	3.50	3.6	2.88
14	(440)	8.2	29	225	4.7	104	3.40		2.90
15	(420)	8.4	29	235	4.6	105	3.22		2.90
16	---	8.5	29	240	---	107	3.00		3.00
17	---	8.25	30	245	---	110	2.60		3.05
18		7.85	30	255		(121)	2.10	2.2	3.05
19		7.35	30	245		140	1.50		3.05
20		6.8	29	240				1.4	2.95
21		6.0	29	260					2.90
22		5.0	29	265					2.70
23		4.5	27	275					2.65

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 16

Slough, England (51.5° N, 0.6° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.2	27	300			----	1.2	2.50
01		5.0	26	305			----	1.0	2.50
02		4.9	24	305			----	1.0	2.50
03		4.5	25	305			----	<1.0	2.50
04		4.2	26	310		175	1.25		2.50
05		4.2	27	290		125	1.60		2.70
06	(450)	4.7	26	260	---	115	2.25		2.80
07	550	5.1	24	245	4.0	105	2.70		2.80
08	570	5.9	24	240	4.2	105	3.05		2.70
09	520	6.8	26	220	4.7	105	3.30		2.80
10	440	7.5	27	215	4.7	105	3.50	3.5	2.80
11	390	7.9	27	210	4.8	105	3.60	3.7	2.80
12	350	8.4	28	215	4.9	105	3.60	3.6	2.80
13	360	8.8	28	220	5.0	105	3.65	3.7	2.80
14	390	8.7	28	230	4.9	105	3.55	3.8	2.80
15	---	8.4	28	230	---	105	3.40	3.6	2.85
16		9.0	27	240		105	3.15		2.85
17		9.0	26	245		105	2.75	2.8	2.90
18		8.8	26	255		115	2.30	2.3	2.95
19		8.4	26	250		---	1.70		2.90
20		7.2	26	240				<1.6	2.80
21		6.4	26	<240				<1.6	2.70
22		5.9	26	<250				<1.6	2.60
23		5.4	26	<260				<1.6	2.50

Time: 0.0°.
Sweep: 0.65 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 17

Winnipeg, Canada (49.9° N, 97.4° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.6	18	320				3.5	(2.70)
01		4.2	19	335				2.9	(2.60)
02		4.5	19	360				2.7	(2.70)
03		4.2	21	330		---	----	1.9	(2.70)
04		4.0	23	320					(2.70)
05		4.0	23	330					2.70
06		4.6	22	300		125	2.00		2.90
07	---	5.0	23	260	---	110	2.50		2.85
08	(385)	5.5	23	230	4.2	110	3.00		2.80
09	490	5.7	24	230	4.5	110	3.20		2.80
10	475	6.0	24	225	4.7	105	3.40		2.70
11	470	6.4	23	210	5.0	100	3.60		2.50
12	400	6.9	23	220	5.0	100	3.60		2.65
13	390	7.2	23	230	5.0	100	3.70		2.70
14	400	7.2	26	230	5.0	105	3.60		2.60
15	445	7.4	26	225	4.9	105	3.40		2.60
16	405	7.5	27	230	4.6	110	3.20		2.70
17	395	7.8	28	240	4.3	110	3.00		2.70
18	---	7.1	26	270	---	115	2.60		2.80
19		7.3	24	270		130	2.00		2.80
20		6.4	22	260					2.80
21		5.6	24	275				2.0	2.80
22		4.6	20	290				2.2	(2.75)
23		4.8	16	295				2.9	(2.65)

Time: 90.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 18

St. John's, Newfoundland (47.6° N, 52.7° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.3	21	312					2.50
01		4.1	25	311					2.50
02		3.8	20	300					2.60
03		3.4	20	305					2.60
04		3.2	22	315					2.60
05		4.3	25	284		130	2.00		2.95
06	---	5.3	25	252	---	120	2.60		3.00
07	G	5.9	27	245	4.0	110	3.00		2.95
08	569	6.4	28	230	4.4	110	3.30		2.90
09	540	6.8	25	229	4.7	110	3.50		2.75
10	459	6.9	27	222	4.8	109	3.70		2.70
11	416	7.2	28	220	5.0	109	3.80		2.75
12	420	7.6	28	224	5.0	110	3.80		2.65
13	430	7.7	28	229	5.0	110	3.70		2.70
14	456	8.2	28	236	4.8	110	3.50		2.70
15	(400)	8.4	28	238	4.6	110	3.35		2.70
16	(384)	8.5	28	242	---	115	3.00		2.70
17	---	8.2	28	265	---	120	2.70		2.75
18		7.8	26	270		135	2.00		2.80
19		7.2	25	260					2.65
20		6.2	25	286					2.60
21		6.2	22	300					2.60
22		5.4	23	305					2.60
23		4.8	24	322					2.60

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 19

Sottens, Switzerland (46.6° N, 6.7° E) April 1960

Time	h'F2	foF2	Count	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	320	5.8	24						2.65
01	310	5.5	25						2.6
02	300	5.4	24						2.7
03	300	5.0	24						2.7
04	300	4.8	23						2.6
05	300	4.5	23						2.7
06	280	4.8	24	---	---	120	1.9		2.9
07	260	5.1	25	250	3.8	110	2.4		3.0
08	270	6.1	19	230	4.4	100	2.8		3.1
09	290	7.1	19	220	4.8	100	3.1		3.0
10	290	7.7	17	220	5.1	100	3.4		3.05
11	300	8.4	21	210	5.2	100	3.5		3.1
12	310	8.8	21	210	5.6	100	3.6		3.0
13	310	8.4	19	210	5.4	100	3.6		2.9
14	310	9.0	17	220	5.3	100	3.6		3.0
15	300	8.5	17	230	5.3	100	3.4		3.0
16	290	8.4	20	230	5.0	100	3.2		3.0
17	280	8.2	22	240	4.4	100	3.0		3.05
18	260	8.4	20	260	3.8	110	2.5	2.8	3.0
19	250	7.5	19	---	---	130	1.9	2.2	(3.0)
20	240	7.4	23						3.0
21	250	7.0	23						2.95
22	270	6.2	24						2.8
23	300	5.7	19						2.6

Time: 15.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 20

Ottawa, Canada (45.4° N, 75.9° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.1	24	330					(2.7)
01		4.1	21	310					(2.75)
02		4.0	22	310					---
03		4.0	23	300					---
04		3.7	21	300					---
05		3.0	25	300		---	1.7		(2.9)
06	---	4.9	25	265	---	115	2.2		3.0
07	(510)	5.8	26	245	4.0	110	2.8		3.0
08	400	6.2	26	230	4.5	110	3.1		3.0
09	520	6.6	28	220	4.6	110	3.4		3.1
10	395	6.9	29	210	4.8	110	3.5		3.0
11	365	7.1	30	210	5.1	110	3.6		2.9
12	450	7.3	29	210	5.0	110	3.8		2.9
13	370	7.6	28	220	5.1	105	3.8		2.0
14	380	0.0	28	230	5.0	105	3.6		2.8
15	415	8.0	27	230	4.9	105	3.4		2.9
16	400	8.3	28	230	4.5	110	3.1		2.8
17	(350)	8.4	29	250	(4.1)	110	2.8		2.9
18	---	8.6	28	265	---	120	2.2		2.9
19		8.1	26	260		---	1.7		(2.9)
20		7.6	24	270					---
21		5.3	26	200					(2.9)
22		5.0	23	290					(2.8)
23		5.0	20	300					(2.7)

Time: 75.0°W.
Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 21

Wakkanai, Japan (45.4° N, 141.7° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.0	27	300					2.60
01		7.0	27	300					2.60
02		6.5	28	290				1.5	2.60
03		6.2	28	285				1.8	2.65
04		6.1	28	295			----		2.60
05		6.4	28	270			1.90		2.70
06	---	7.4	29	245	---		2.50		2.90
07	(410)	8.8	29	245	---		2.95		2.05
08	(415)	9.8	29	245	4.6		3.25	3.8	2.90
09	320	9.6	30	240	4.8		3.45	4.1	2.80
10	360	10.0	30	230	5.1		3.55		2.80
11	360	10.6	30	225	5.4		3.60		2.75
12	345	10.8	30	230	5.2		3.55		2.75
13	330	10.8	30	230	5.2		3.55		2.80
14	(340)	10.6	30	235	5.0		3.50		2.80
15	---	10.3	30	245	---		3.30		2.85
16	---	10.0	30	250			3.00		2.85
17		9.6	30	255			2.55	2.9	2.85
18		9.6	30	260			2.00		2.90
19		9.0	30	250				2.0	2.85
20		8.3	29	265					2.75
21		7.4	28	270					2.65
22		7.1	27	290					2.60
23		7.0	27	305					2.55

Time: 135.0°E.
Sweep: 1.0 Mc to 20.7 Mc in 1 minute.

Table 22

Genoa (Monte Capellino), Italy (44.6° N, 9.0° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.6	28	325					
01		6.5	29	320					
02		6.3	29	320					
03		6.0	27	315					
04		5.9	28	310					
05		5.4	28	320					
06		5.5	30	285			1.6		
07		6.3	28	250			2.4		
08		7.2	29	235			2.9	3.2	
09		8.2	30	220			3.2	3.5	
10		9.0	28	220			3.4	3.9	
11		10.0	28	215			3.6	4.0	
12		10.7	28	215			3.7	4.0	
13		10.5	30	220			3.7	3.8	
14		10.5	30	225			3.6		
15		10.4	29	225			3.5		
16		10.2	28	230			3.2	3.4	
17		10.5	29	245			2.9	3.4	
18		10.0	30	260			2.4	2.9	
19		10.4	30	255				2.2	
20		8.9	29	255				1.8	
21		8.0	28	255				1.8	
22		7.0	29	280					
23		6.6	29	305					

Time: 15.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 5 minutes, automatic operation.

Table 23

Ft. Monmouth, New Jersey (40.4° N, 74.1° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.9	26	<300					2.65
01		5.4	24	<300					2.65
02		4.9	22	(305)					2.65
03		4.7	19	<310					2.65
04		(4.65)	18	<310					(2.70)
05		3.7	22	<305					2.75
06	---	5.1	29	250	---	120	----		3.08
07	460	6.3	29	235	4.0	115	2.85		3.05
08	440	6.9	28	225	4.3	115	3.20		3.00
09	405	7.3	29	210	4.6	112	3.40		2.90
10	490	7.6	28	210	4.8	110	3.65		2.85
11	375	8.0	27	215	4.8	110	----		2.80
12	355	8.15	28	220	5.0	110	3.75		2.80
13	345	8.6	27	220	5.0	110	3.80		2.80
14	335	8.7	29	230	4.8	111	3.70		2.80
15	360	8.6	28	230	4.7	112	3.50		2.82
16	360	8.3	28	230	(4.4)	115	3.20		2.85
17	(320)	8.5	28	245	---	119	2.75		2.90
18	(300)	9.0	29	260		---	----		2.95
19		8.85	26	245					2.90
20		8.2	27	250					2.80
21		7.3	26	(265)					2.75
22		6.7	24	<280					2.70
23		6.5	21	(285)					2.65

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 24

Akita, Japan (39.7° N, 140.1° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.6	30	295					2.70
01		7.6	30	295					2.70
02		7.4	30	275					2.75
03		6.7	30	270					2.70
04		6.3	30	295					2.60
05		6.8	30	290			----		2.70
06	---	8.0	30	245	---		2.30	2.5	3.00
07	(360)	9.0	30	245	---		2.90	3.5	3.00
08	285	10.3	30	245	---		3.30	4.0	3.00
09	265	11.2	29	240	---		3.55	4.4	2.90
10	260	11.7	29	225	5.1		3.65	4.3	2.85
11	270	11.8	30	220	5.3		3.75	4.0	2.80
12	300	12.3	29	220	5.4		3.80	4.1	2.80
13	300	12.3	30	225	5.4		3.70	4.0	2.80
14	295	12.0	29	240	---		3.55	3.9	2.85
15	280	11.7	29	245	---		3.45	3.5	2.85
16	(280)	11.2	30	245	---		3.00	3.5	2.90
17	---	10.7	30	250	---		2.50	3.0	2.95
18		10.5	30	255			----	(2.8)	3.00
19		9.6	30	245				(2.9)	3.00
20		8.5	30	250				(2.3)	2.80
21		7.9	30	265				(2.2)	2.70
22		7.6	30	295					2.65
23		7.6	30	300					2.65

Time: 135.0°E.
Sweep: 1.6 Mc to 20.0 Mc in 20 seconds.

Table 25

Tokyo, Japan (35.7° N, 139.5° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(8.1)	28	300					(2.65)
01		7.9	29	290			----		2.75
02		7.6	29	260			----		2.80
03		6.7	29	255			----		2.70
04		6.6	29	295			----		2.60
05		6.6	29	295			----		2.60
06		8.7	28	245			2.40		3.00
07		9.4	28	230			2.95	3.3	3.00
08	(310)	10.9	28	240	---		3.25	4.0	2.95
09	280	11.4	28	240	---		3.50	4.3	2.90
10	275	12.3	29	230	5.3		3.70	4.4	2.80
11	290	12.6	29	220	6.0		(3.80)	4.4	2.80
12	300	13.0	30	(230)	6.0		(3.85)	4.3	2.80
13	300	13.4	30	220	5.7		(3.75)	4.2	2.80
14	295	13.3	30	230	---		3.65	4.0	2.80
15	280	12.8	30	235	---		(3.50)	3.8	2.85
16	(280)	12.2	30	250	---		3.00	3.8	2.90
17	---	11.7	30	250			2.50	4.0	2.90
18	---	11.4	30	<250			----	3.2	3.00
19		10.0	30	245				(3.2)	3.00
20		8.1	30	250				2.4	2.75
21		7.9	30	300				(2.2)	2.65
22		(8.0)	30	305				2.6	(2.60)
23		7.8	30	305				2.4	2.65

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 20 seconds.

Table 26

Yamagawa, Japan (31.2° N, 130.6° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(9.2)	24	295				2.2	(2.75)
01		9.1	26	280				2.2	2.85
02		9.0	27	260				1.6	2.90
03		7.6	25	250				1.3	2.75
04		6.9	29	260					2.65
05		6.7	29	300					2.65
06		7.8	28	255			2.00		2.80
07	---	9.7	30	245	---		2.60	3.0	3.05
08	---	10.7	29	245	---		3.10	3.9	3.00
09	---	11.6	30	240	---		3.40	4.2	2.90
10	---	12.2	30	245	---		3.65	4.9	2.80
11	---	13.1	30	235	---		3.80	4.6	2.75
12	(315)	13.6	30	235	---		3.80	4.5	2.80
13	(300)	14.0	28	245	---		3.85	4.8	2.75
14	(330)	14.6	27	235	---		3.80	4.5	2.80
15	(300)	14.4	27	250	---		3.65	4.8	2.75
16	---	13.6	28	245	---		3.40	3.8	2.80
17	---	13.1	28	250			3.00	3.3	2.85
18	---	12.9	27	260			2.25	3.1	2.90
19		12.1	28	250				3.0	2.95
20		(10.0)	29	250				2.7	(2.75)
21		(9.0)	26	290				3.0	(2.60)
22		9.1	25	305				(2.3)	2.60
23		(9.2)	26	310				2.3	(2.60)

Time: 135.0°E.
Sweep: 1.0 Mc to 20.0 Mc in 30 seconds.

Table 27

Formosa, China (25.0° N, 121.5° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>14.0	29	240				(2.2)	3.20
01		13.7	28	230				(1.8)	3.25
02		10.8	28	210		---	----	(2.0)	3.20
03		8.3	27	220		---	----	(2.2)	3.00
04		7.4	25	240		---	----	1.7	2.90
05		6.6	26	235		---	----	1.4	2.95
06		8.1	28	230		---	----		3.20
07	---	9.5	30	220		(105)	----	3.2	3.25
08	---	11.1	30	220		101	----	3.9	3.10
09	---	12.3	29	215	---	101	----	4.2	2.95
10	---	13.0	29	(215)	---	101	----	4.4	2.90
11	---	14.4	30	<230	---	101	----	4.9	2.90
12	---	15.8	30	(220)	---	(101)	----	4.4	2.85
13	(330)	16.4	30	(215)	---	<108	----	4.6	2.85
14	320	16.8	30	(220)	---	<105	----	4.2	2.90
15	(310)	>16.8	28	215		<107	(3.60)	3.0	2.90
16	(280)	>16.8	30	220		105	3.25	3.7	(2.95)
17	---	>16.7	28	235		(109)	----	3.2	3.00
18		>15.4	30	240				3.0	(3.05)
19		>14.5	30	240				(2.9)	(2.95)
20		>14.4	30	255				(2.6)	(2.95)
21		(14.6)	30	260				(2.8)	(2.90)
22		15.0	29	265				(2.9)	(2.90)
23		14.0	27	250				(2.9)	(3.10)

Time: 120.0°E.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 28

Maui, Hawaii (20.8° N, 156.5° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.0	30	<275				2.6	2.88
01		7.75	30	<270				>2.4	3.00
02		7.0	30	<250				2.5	3.05
03		5.55	30	<255				2.0	2.80
04		5.4	29	<285				2.0	2.80
05		5.0	29	<295		---	----	1.9	2.75
06		5.1	29	285		---	----		2.90
07		8.2	29	245		115	2.50	2.7	3.25
08	---	9.3	29	235		109	3.10	3.6	3.10
09	(260)	10.5	29	<230	---	107	3.45	4.2	2.90
10	295	11.4	29	(215)	---	107	3.65	4.3	2.70
11	(310)	12.4	29	220	---	109	(3.80)	4.4	2.75
12	(330)	13.6	29	220	---	(109)	(3.90)	4.6	2.80
13	320	14.2	29	220	---	109	(3.95)	>4.3	2.85
14	330	14.2	30	220	---	(109)	3.90	4.4	2.85
15	310	14.8	30	230	---	(109)	3.70	4.2	2.90
16	290	14.55	30	230	---	109	3.40	3.9	2.92
17	280	13.95	30	(240)	---	113	2.98	3.9	3.00
18	---	13.35	30	255	---	119	2.20	4.5	3.05
19		12.5	30	245		---	----	3.8	3.10
20		10.95	30	245				4.8	3.00
21		9.6	30	(260)				2.9	2.88
22		8.95	30	<285				2.9	2.78
23		8.3	30	<285				3.2	2.82

Time: 150.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 29

Singapore, British Malaya (1.3° N, 103.8° E) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		12.9	22	225		---			3.05
01		11.4	24	220		---			3.10
02		8.8	24	225		---			3.10
03		7.7	27	230		---		1.4	3.15
04		6.2	26	230		---		2.0	3.10
05		4.6	25	230		---		1.2	3.25
06	---	5.5	29	270	---	130	----		2.05
07	---	10.2	30	250	---	125	2.60		3.05
08	---	12.4	29	240	---	115	3.25	3.5	2.95
09	---	13.4	30	225	---	110	3.70		2.65
10	---	13.7	29	220	---	110	4.00		2.35
11	---	>13.3	29	210	---	110	4.10		2.20
12	---	13.1	29	210	---	110	4.15		2.20
13	---	13.2	30	205	---	110	4.10		2.20
14	---	13.6	30	220	---	110	4.00	4.0	2.25
15	---	13.8	29	230	---	110	3.70	4.0	2.30
16	---	14.0	28	240	---	115	3.30	3.9	2.40
17	---	14.2	30	255	---	115	2.60	3.3	2.40
18	---	14.2	29	275	---			4.0	2.40
19		13.9	27	340				1.8	2.35
20		>14.0	12	330					(2.60)
21		>14.2	12	250				2.5	(2.75)
22		13.5	12	220				2.9	(2.85)
23		>14.0	18	215				1.8	2.90

Time: 105.0°E.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 30

Falkland Is.(51.7° S, 57.8° W) April 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.7	25	<350					2.30
01		4.2	24	360		---			2.40
02		4.2	24	345		155	----		2.30
03		4.3	24	325		140	----		2.45
04		4.2	22	300			----	2.0	(2.55)
05		4.1	21	260		---	----	1.4	(2.50)
06		4.2	23	260		---	E	1.3	(2.30)
07		6.9	25	240		140	1.65		3.25
08		9.6	24	225		120	2.45	2.6	3.30
09	350	11.2	28	230		115	2.80	(3.4)	3.10
10	385	12.9	22	230	---	110	----	(3.7)	3.15
11	295	13.4	23	235	---	110	----	(4.3)	(3.05)
12	280	13.4	25	235	---	110	----	(4.2)	3.10
13	275	12.4	28	225	---	105	3.10	3.6	3.15
14	---	11.7	29	230		105	3.00	3.5	3.25
15	350	11.1	27	235		105	----	3.0	3.20
16		10.2	26	230		115	----	(2.8)	3.35
17		9.0	28	225		115	----	(2.6)	3.30
18		7.7	25	230		---	E	(3.6)	3.30
19		6.0	28	240				(2.6)	(3.10)
20		5.2	26	<245				(2.3)	(3.00)
21		4.6	25	260				(2.2)	(2.65)
22		4.6	23	<320				(2.2)	(2.40)
23		4.5	23	<325					2.25

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 31

Resolute Bay, Canada (74.7° N, 94.9° W) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.6	31	250					2.70
01		5.5	31	250					2.70
02		5.0	31	260		---	----		2.60
03		5.0	30	260		---	----		2.65
04		4.8	30	280		---	1.30		2.70
05		5.1	30	275		---	1.40		2.75
06		4.9	30	260		120	1.50		2.80
07		5.4	30	265		120	1.75		2.80
08		5.9	30	260	---	110	2.00		2.80
09	---	5.8	30	260	---	110	2.20		2.70
10	355	6.0	30	255	3.8	110	2.30		2.70
11	330	6.1	30	250	3.8	105	2.40		2.70
12	360	6.0	30	250	4.0	100	2.40		2.70
13	350	6.0	29	250	3.8	100	2.45		2.70
14	330	6.4	30	250	3.8	110	2.40		2.80
15	(350)	6.2	30	250	3.8	110	2.30		2.60
16	---	6.0	30	265	---	110	2.20		2.60
17	---	5.9	31	270	---	110	2.00		2.60
18	---	6.2	31	285	---	120	1.70		2.70
19	---	6.0	31	280	---	120	1.50	1.6	2.60
20		6.0	30	280		---	1.40	1.6	2.70
21		5.1	30	275		---	----	1.2	2.60
22		5.1	30	265		---	----		2.60
23		5.0	30	260		---	----		2.70

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 32

Churchill, Canada (58.8° N, 94.2° W) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.4	26	310				4.6	
01		4.8	25	300				4.0	
02		5.0	28	300				3.4	----
03		4.4	25	300				3.0	----
04		4.4	24	325				3.2	----
05		(4.6)	24	360				3.2	
06		4.5	25	345				3.8	----
07		5.2	24	300		---	----	4.0	(2.90)
08	---	5.8	25	300	---	110	2.80	3.8	2.95
09	(395)	6.4	26	275	4.2	110	3.10		2.95
10	340	6.8	30	250	4.4	110	3.15		3.00
11	365	7.0	30	240	4.6	110	3.10		2.85
12	320	7.4	30	235	4.6	110	3.10		2.85
13	310	8.2	30	240	4.6	110	3.15		2.85
14	315	8.9	30	230	4.5	110	3.05		2.85
15	310	8.5	29	240	4.3	110	3.00		2.90
16	(350)	8.0	29	250	4.2	110	2.90		2.90
17	---	7.9	29	265	---	115	2.40		2.90
18		6.6	28	280		125	2.00	2.5	2.85
19		6.0	28	310		---	----	3.0	(2.85)
20		5.2	26	300		---	----	3.0	----
21		5.1	27	300		---	----	3.8	----
22		5.0	26	300				4.8	----
23		4.6	25	275				5.7	

Time: 90.0°W.
Sweep: 1.0 Mc to 17.0 Mc in 16 seconds.

Table 33

Winnipeg, Canada (49.9° N, 97.4° W) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		4.2	29	295					(2.80)
01		3.8	28	300					(2.80)
02		3.6	28	310					(2.80)
03		3.3	27	320					(2.70)
04		3.7	26	<320		---	----		(2.70)
05		3.8	26	320		---	----		(2.70)
06		3.8	28	300		---	----		(2.90)
07		4.9	28	270		120	2.00		3.10
08	---	5.8	30	245		110	2.50		3.00
09	---	6.3	31	230	---	110	2.90		3.00
10	350	7.0	30	220	4.5	110	3.00		2.90
11	320	7.6	29	220	4.8	110	3.25		2.85
12	340	8.1	30	210	5.0	105	3.30		2.85
13	330	8.2	30	220	5.0	105	3.40		2.80
14	325	8.5	31	230	4.9	105	3.30		2.80
15	320	8.7	30	230	4.6	110	3.10		2.85
16	(300)	8.9	29	230	---	110	3.00		2.85
17	---	8.5	29	250		110	2.70		2.90
18		8.8	28	250		125	2.10		2.90
19		8.2	29	240		---	----		2.90
20		7.2	29	240					2.90
21		6.2	28	240					2.90
22		5.4	28	250					2.90
23		4.6	26	280					(2.90)

Time: 90.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 34

St. John's, Newfoundland (47.6° N, 52.7° W) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.9	26	290					2.65
01		5.6	28	294					2.65
02		4.9	28	284					2.65
03		4.5	27	289					2.70
04		4.0	31	271					2.70
05		4.0	30	280		---	----		2.80
06		5.2	31	260		122	2.10		3.05
07	---	7.0	31	241		118	2.55		3.15
08	---	7.6	31	238	---	112	3.00		3.10
09	(300)	8.3	31	220	4.4	111	3.20		3.00
10	(405)	9.0	29	222	---	110	3.50		2.95
11	---	9.5	29	220	---	110	3.60		2.90
12	(322)	10.1	31	221	---	111	3.50		2.90
13	(275)	10.3	31	220	---	112	3.45		2.90
14	(295)	10.3	31	229	---	113	3.30		2.90
15	---	10.1	30	234		115	3.00		2.90
16	---	10.0	31	247		120	2.70		2.90
17		9.9	30	245		130	2.10		3.00
18		9.4	30	239		---	----		2.95
19		8.4	30	240		---	----		2.85
20		7.5	29	255					2.75
21		7.0	28	268					2.70
22		6.5	25	278					2.70
23		6.1	27	285					2.65

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 35

Ottawa, Canada (45.4° N, 75.9° W) March 1960

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.1	30	285					2.8
01		5.0	29	300					2.75
02		4.4	29	300					----
03		4.2	30	300					----
04		4.0	30	300					----
05		3.5	29	300					----
06		4.0	30	290		---	1.7		(2.95)
07		5.7	31	250		115	2.0		3.2
08	---	6.6	31	235	---	110	2.8		3.2
09	300	7.4	29	220	(4.6)	110	3.0		3.1
10	295	8.5	29	210	(5.0)	110	3.2		3.1
11	305	9.0	31	210	5.0	110	3.3		3.0
12	290	9.2	31	205	5.0	105	3.5		3.0
13	340	9.7	31	210	5.0	110	3.4		2.95
14	310	9.8	31	220	(4.9)	110	3.3		3.0
15	(300)	9.5	31	230	(4.5)	110	3.1		3.0
16	(380)	9.5	31	240	(4.3)	110	2.9		3.0
17	---	9.4	30	250	---	110	2.4		3.0
18		9.2	30	250		125	1.9		3.0
19		8.5	31	240					3.0
20		7.7	28	250					3.0
21		7.0	28	250					2.9
22		6.2	28	260					3.0
23		5.0	27	280					2.85

Time: 75.0°W.
Sweep: 1.0 Mc to 20.0 Mc in 16 seconds.

Table 36

Bunia, Belgian Congo (1.5° N, 30.2° E) March 1960

Time	h'F2	foF2	Count	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	250	9.2	12						2.72
01	240	9.4	15						2.83
02	230	9.1	12					1.6	2.96
03	220	6.6	19					2.0	3.10
04	240	5.5	22					2.0	3.00
05	250	9.1	25	250	---	120	2.5	3.1	3.02
06	---	10.6	26	235	---	115	3.1	4.0	2.82
07	---	11.6	24	230	---	110	3.5		2.56
08	---	12.4	25	220	---	110	3.7		2.38
09	---	13.0	19	220	---	110	4.0		2.25
10	---	13.4	12	215	---	110	4.0		2.24
11	---	13.6	21	215	---	110	4.0		2.21
12	---	13.6	21	245	---	110	3.9		2.22
13	---	13.8	20	235	---	110	3.5		<2.27
14	---	>13.8	22	240	---	115	3.2		<2.25
15	---	14.3	17	250	---	120	2.6	2.9	2.25
16	---	14.1	15	270	---	---	---	2.4	2.25
17	350	(14.0)	6						<2.18
18	340	(14.3)	1						----
19	270	(14.3)	1						----
20	230	(14.2)	2						----
21	210	>13.4	7						(2.82)
22	210	11.6	10						2.92
23	230	9.6	11						2.68

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 37

Leopoldville, Belgian Congo (4.4° S, 15.2° E) March 1960

Time	h'F2	foF2—Count		h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	12.4	10						2.80
01	230	8.0	11						2.70
02	240	6.8	16						2.73
03	230	6.4	23						2.88
04	225	4.8	28					1.5	3.00
05	250	4.7	30			---	---	1.8	2.82
06	250	8.3	17	240	---	120	2.5		2.97
07	250	>9.2	20	230	---	115	3.2		<2.80
08	(270)	10.4	14	230	---	110	3.6		2.50
09	(290)	11.7	19	230	---	110	3.8		2.43
10	---	13.0	11	235	---	110	---		2.43
11	(400)	13.6	17	---	---	110	---		<2.30
12	375	14.4	16	250	---	110	---		<2.35
13	380	>15.2	18	240	---	115	3.9		2.38
14	350	15.4	18	235	---	115	3.6		2.34
15	365	>15.0	14	240	---	115	3.2		<2.37
16	(345)	(14.0)	6	250	---	120	2.6		(2.42)
17	280	(14.8)	4	270	---	---	---	1.7	----
18	300	----	0						
19	280	----	0						
20	240	----	0						
21	225	(16.2)	2						----
22	225	14.6	12						2.74
23	222	14.5	10						2.83

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 38

Elisabethville, Belgian Congo (11.6° S, 27.5° E) March 1960

Time	h'F2	foF2—Count		h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	6.5	19						2.87
01	250	5.4	23						2.80
02	260	4.5	24						2.78
03	245	4.2	25					1.5	2.93
04	260	4.3	25			---	---	1.5	2.88
05	250	8.1	21	250	---	120	2.4		3.03
06	250	9.6	24	240	---	115	3.0		2.97
07	270	10.4	25	230	---	110	3.4		2.82
08	290	11.2	26	230	---	110	3.6		2.59
09	300	12.0	27	230	---	110	3.9		2.59
10	315	12.7	25	230	---	110	4.0		2.55
11	330	13.0	25	230	---	110	4.0		2.53
12	330	13.6	26	235	---	110	3.9		2.55
13	315	14.0	25	230	---	110	3.6	3.6	2.57
14	300	13.0	26	250	---	110	3.3	4.0	2.56
15	290	12.7	25	250	---	115	2.8	3.6	2.57
16	260	12.8	18	265	---	---	---	3.0	2.62
17	260	(12.6)	7					2.6	<2.65
18	255	(12.9)	8						(2.76)
19	240	12.1	14						2.82
20	230	11.0	16						2.83
21	235	10.0	19						2.83
22	240	9.1	19						2.84
23	235	8.6	18						<2.87

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 7 seconds.

Table 39

Pole Station (90.0° S) June 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(4.35)	22	260			---	2.0	(2.95)
01		(4.3)	23	270				2.2	(2.68)
02		(4.9)	20	270				2.0	(2.70)
03		(4.65)	22	270					(2.65)
04		(5.4)	21	290					(2.60)
05		(5.0)	23	265					(2.70)
06		(5.4)	20	290					(2.55)
07		(5.2)	15	300					(2.55)
08		(5.2)	20	300					(2.60)
09		(4.7)	18	300		---	---		(2.60)
10		(4.8)	15	205		---	---	2.1	2.68
11		(4.6)	20	(290)		---	---	2.6	(2.72)
12		(4.5)	18	<300		---	---	2.2	(2.75)
13		(4.7)	16	275		---	---	2.0	(2.90)
14		(4.4)	12	275		---	---	2.5	(2.80)
15		(4.6)	12	300		---	---		(2.65)
16		(4.35)	18	300		---	---		(2.70)
17		(4.35)	16	320		---	---		(2.65)
18		(4.3)	8	290		---	---	2.2	(2.85)
19		(4.5)	10	270		---	---	3.0	(3.05)
20		(4.3)	8	(265)		---	---	2.9	(2.70)
21		(4.55)	14	255		---	---	2.6	(2.95)
22		(3.5)	12	240				2.6	(3.00)
23		(3.8)	12	260				2.2	(3.02)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 40

Pole Station (90.0° S) May 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(5.3)	15	260					(2.60)
01		(6.4)	20	260				2.4	(2.65)
02		(5.65)	18	270					(2.60)
03		(6.8)	21	285					(2.55)
04		(6.5)	22	275					(2.50)
05		(7.0)	19	280					(2.62)
06		(7.0)	19	<290		---	----		(2.65)
07		(6.2)	19	305		---	----		(2.55)
08		(6.0)	17	280		---	----		(2.60)
09		(6.0)	15	<310		---	----		(2.60)
10		(5.2)	20	300		---	----		2.55
11		5.5	16	300		---	----	2.7	2.50
12		(5.6)	16	285		115	(2.40)	2.9	(2.75)
13		(5.2)	15	300		---	----	2.9	(2.65)
14		4.95	14	300		---	----	2.5	2.75
15		(5.6)	21	290		---	----	2.1	(2.70)
16		6.6	17	290		---	----		2.80
17		(5.35)	8	280		---	----	2.2	(2.65)
18		(4.1)	6	265		---	----	2.8	(2.90)
19		(5.85)	8	240		---	----	2.0	(3.20)
20		(5.1)	9	250		126	2.08	2.1	(2.80)
21		(4.6)	15	240		---	----	2.3	(2.92)
22		(4.75)	8	240				2.6	(2.80)
23		(4.2)	16	270				2.0	(2.65)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 41

Svalbard, Norway (78.2° N, 15.7° E) April 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00	---	5.3	13	300	----	---	1.65	1.9	----
01	---	(4.5)	17	300	----	135	1.55	1.8	(2.60)
02	---	4.4	16	280	----	130	1.70	1.8	(2.60)
03	---	4.5	19	290	----	120	2.05	2.3	----
04	(595)	4.5	16	275	3.20	120	2.20	2.6	(2.50)
05	(570)	4.4	14	270	3.60	110	2.45	3.0	----
06	(675)	(5.0)	15	280	3.90	110	2.60	2.9	(2.05)
07	---	6.3	16	275	3.90	110	2.70	3.0	(2.20)
08	(570)	7.1	20	260	4.05	105	2.90		2.50
09	(420)	8.7	19	250	4.20	105	3.00	3.1	2.65
10	(400)	8.3	25	250	4.45	110	3.00	3.0	2.55
11	(475)	8.1	23	245	4.50	110	3.00		(2.60)
12	(570)	7.8	18	245	4.30	115	2.95		2.65
13	---	7.4	18	250	4.40	110	3.00	3.0	(2.60)
14	---	7.0	18	250	----	110	3.00	3.1	(2.85)
15	(515	7.0	27	255	4.35	110	2.90	3.0	(2.70)
16	---	7.5	23	250	----	110	2.75	3.0	2.80
17	---	(7.3)	21	255	----	110	2.60	3.4	----
18	---	7.1	22	260	----	110	2.60	4.0	2.70
19	---	(6.6)	16	260	----	115	2.20	4.0	----
20	---	(6.7)	22	280		120	2.10	2.8	(2.70)
21	---	(6.9)	23	290		120	1.95	2.5	(2.65)
22	---	6.4	22	295		130	1.85	2.0	(2.65)
23	(280)	5.2	19	295		---	1.75	2.2	(2.65)

Time: 15.0°E.
Sweep: 0.68 Mc to 24.6 Mc in 5 minutes, automatic operation.

Table 42

Juliusruh/Rügen, Germany (54.6° N, 13.4° E) April 1959

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.5	28	330					2.35
01		6.2	27	310			E		2.35
02		5.8	26	310			E	1.0	2.30
03		5.7	26	310			E	1.0	2.35
04		5.0	28	300			E		2.40
05		5.2	29	300			75		2.60
06	---	6.2	30	280	---		2.35		2.80
07	---	6.6	30	250	---		2.80		2.80
08	---	7.9	29	245	---		3.20	3.4	2.70
09	(495)	8.6	29	240	5.2		3.50		2.60
10	(500)	9.3	29	235	5.2		3.70		2.60
11	(480)	10.1	29	240	5.3		3.75	3.8	2.60
12	(480)	10.4	30	240	5.6		3.80	3.8	2.60
13	(490)	10.2	28	240	5.5		3.75		2.60
14	(445)	10.1	30	240	5.3		3.60		2.60
15	---	9.8	30	240	---		3.50	3.5	2.60
16	---	9.9	30	245	---		3.30	3.4	2.65
17		9.8	30	250			3.00	3.0	2.70
18		9.6	30	260			2.45		2.70
19		9.3	28	265			1.90		2.75
20		8.6	30	260					2.70
21		8.2	29	260					2.60
22		7.3	29	290					2.45
23		6.8	29	310					2.50

Time: 15.0°E.
Sweep: 0.5 Mc to 20.0 Mc in 20 seconds.

Table 43

Lindau/Harz, Germany (51.6° N, 10.1° E) April 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	fEs	(M3000)F2
00		6.86	30	320					2.44
01		6.64	30	316					2.41
02		6.36	30	316					2.42
03		6.08	30	306					2.40
04		5.67	29	303		---	----		2.44
05		5.46	28	300		---	E		2.60
06		6.29	30	270		112	2.11		2.78
07	---	6.82	30	250	----	110	2.62		2.80
08	(460)	7.91	30	236	4.80	106	3.12		2.69
09	(493)	8.78	30	230	5.30	104	3.40		2.70
10	(516)	9.90	29	228	5.25	104	3.65		2.66
11	(488)	10.36	30	229	5.48	104	3.76		2.64
12	(470)	11.12	30	224	5.45	103	3.80	3.8	2.62
13	(440)	10.92	30	230	5.80	103	3.81	4.4	2.64
14	---	10.58	30	230	----	102	3.75	4.1	2.64
15	---	10.27	29	232	----	104	3.55	4.0	2.65
16	---	10.22	30	237	----	104	3.37	3.5	2.66
17		10.08	30	244		105	3.00	3.2	2.70
18		10.05	30	254		110	2.48		2.74
19		9.75	30	260		---	1.90	2.4	2.80
20		9.16	30	252		---	----		2.72
21		8.36	30	253					2.58
22		7.72	30	278					2.50
23		7.25	30	299					2.43

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 44

El Cerillo, Mexico (19.3° N, 99.5° W) April 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.9	21	290					2.75
01		8.6	21	260					2.90
02		8.0	21	250					2.85
03		7.6	21	250					2.65
04		7.1	21	270					2.70
05		6.8	20	270					2.65
06		6.6	20	280					2.70
07		8.3	20	230					3.00
08		10.4	21	230					3.00
09		(11.6)	23	220					(2.95)
10		(12.2)	24	215					(2.80)
11		(12.7)	22	210					(2.70)
12		(13.0)	21	215					(2.70)
13		(13.6)	21	210					(2.65)
14		(14.0)	19	215					(2.65)
15		(13.5)	24	220					(2.65)
16		(13.1)	22	230					(2.70)
17		(12.3)	22	240					(2.70)
18		(11.4)	22	240					(2.70)
19		10.9	22	250					2.80
20		10.6	22	260					2.80
21		10.0	23	260					2.70
22		9.5	23	270					2.75
23		9.1	22	275					2.70

Time: 90.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 18 seconds.

Table 45

Sao Paulo, Brazil (23.5° S, 46.5° W) April 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(14.2)	18	220					(3.30)
01		>14.0	20	220					(3.30)
02		11.9	20	215					3.25
03		10.1	20	215					3.10
04		6.8	20	230					2.90
05		6.0	19	240					2.90
06		6.1	21	265			----		2.80
07		10.0	20	240			(2.60)		3.10
08		12.0	18	230			(3.30)		3.10
09		14.0	17	225			----		3.00
10		14.2	14	230			----		2.80
11		(14.4)	16	225			----		(2.80)
12		14.4	10	<225			----		(2.60)
13		(14.5)	12	(225)			----		(2.60)
14	---	(14.5)	12	230			----		(2.80)
15	---	(14.5)	17	235			----		(2.80)
16		(14.6)	14	235			(3.40)		(2.90)
17		(14.5)	21	245			----		(2.90)
18		(14.5)	17	260			----		(3.00)
19		>14.0	16	285					(2.85)
20		>14.0	16	300					(2.70)
21		>14.0	18	255					(3.10)
22		>14.0	18	230				2.1	(3.15)
23		(14.2)	20	225					(3.20)

Time: 45.0°W.
Sweep: 1.75 Mc to 20.0 Mc in 2 minutes 30 seconds.

Table 46

Buenos Aires, Argentina (34.5° S, 58.5° W) April 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		10.4	24	260					2.85
01		9.6	22	250					2.80
02		8.8	22	260					2.85
03		8.1	22	250					3.00
04		6.6	21	225					2.95
05		5.5	21	260					2.50
06		6.2	21	290					2.65
07		10.0	21	240					3.05
08		>11.5	23	230					(3.00)
09		(12.9)	25	230					(3.00)
10		>12.0	23	230					(2.85)
11		(14.3)	23	230					2.80
12	---	>14.9	26	230					2.70
13	---	(15.2)	24	240					2.70
14	(330)	15.5	25	240			---		2.75
15	---	15.4	27	240			---		2.80
16		15.2	29	250			---		2.80
17		15.1	27	245			---		2.90
18		(14.1)	27	230					(2.90)
19		>14.5	27	250					(2.80)
20		(13.4)	27	250					2.90
21		(13.0)	25	230					2.90
22		>12.0	25	250					2.85
23		>11.2	24	250					2.90

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 47

Canberra, Australia (35.3° S, 149.0° E) April 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.4	30	250					2.70
01		7.3	30	250					2.80
02		7.2	30	250					2.75
03		7.2	30	240					2.85
04		6.8	30	240					2.80
05		>6.1	30	230					2.70
06		(6.5)	29	230			<1.60		(2.75)
07		>9.0	29	210			2.20		(3.15)
08		>10.0	29	200			2.90		----
09		>11.0	30	200			3.35		----
10		>12.0	26	200			3.60		----
11		>12.0	26	200			3.70		----
12		>12.0	28	200			3.80		----
13		>12.0	23	200			3.80		----
14		(12.0)	23	200			3.65		----
15		>10.5	26	200			3.40		(2.90)
16		>10.0	28	210			3.00	3.0	(2.90)
17		>10.0	28	210			2.30		----
18		>9.6	29	200			<1.60		----
19		>9.5	30	210					(2.90)
20		(9.2)	30	210					(2.80)
21		>8.5	30	220					2.80
22		7.8	29	225					2.80
23		7.5	30	240					2.75

Time: 150.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 1 minute 55 seconds.

Table 48

Dourbes, Belgium (50.1° N, 4.6° E) March 1959

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.5	29	300				<1.6	2.55
01		6.0	30	280					2.55
02		5.8	30	290					2.50
03		5.6	30	300					2.50
04		5.0	28	300				<1.3	2.55
05		4.8	30	290		---	<1.60	<1.6	2.60
06		5.8	30	270		(129)	<1.60	<1.6	2.85
07	---	8.2	30	245	---	111	2.55		3.00
08	---	8.9	26	235	---	109	2.95		3.00
09	---	10.1	26	225	---	109	3.20	3.2	2.95
10	---	10.8	24	225	---	108	3.35		2.85
11	---	11.8	23	225	---	109	3.50		2.85
12	---	11.7	25	225	---	109	3.50		2.80
13		11.9	26	230	---	(111)	3.55		2.75
14		11.7	25	235	---	(109)	3.40		2.75
15		11.7	25	235		111	3.25		2.80
16		11.4	26	240		<115	2.85		2.80
17		11.1	27	245		(117)	2.25		2.90
18		10.6	28	235		---	<1.60	<1.6	2.90
19		(9.3)	29	235				<1.6	(2.85)
20		(8.1)	31	240				<1.6	(2.70)
21		7.3	31	250				<1.6	2.70
22		(7.1)	30	275				<1.6	(2.65)
23		(6.8)	30	290				<1.6	(2.55)

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 49

Eureka, Canada (80.0° N, 85.9° W) December 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.2	30	270					
01		5.0	31	270					
02		5.1	31	270					
03		4.8	31	270					
04		5.0	31	200					
05		5.2	30	280					
06		4.7	31	270					
07		5.0	31	270					
08		4.8	30	270					
09		5.6	30	270					
10		5.4	30	260				2.4	
11		6.2	29	250					
12		6.2	31	260					
13		6.5	30	260					
14		6.6	29	250					
15		7.0	29	250					
16		6.8	30	260					
17		6.0	31	260					
18		6.2	31	260					
19		6.2	30	280					
20		5.8	30	270					
21		5.4	29	260					
22		5.6	31	270					
23		5.6	30	270					

Time: 75.0°W.
Sweep: 1.8 Mc to 20.0 Mc in 15 seconds.

Table 50

Frobisher, Canada (63.8° N, 68.6° W) December 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		5.2	24	290				3.8	
01		5.1	25	300		---	---	3.6	
02		4.9	25	300		---	---		
03		4.4	26	300		---	---	4.5	
04		4.7	25	290		---	---	3.1	
05		4.6	25	290		---	---	3.6	
06		4.6	23	290		---	---	3.0	
07		5.0	24	300		---	---	3.7	
08		5.4	24	290		---	---	3.0	
09		7.4	26	280		---	2.1	2.1	
10		10.4	27	260		---	2.3		
11		11.6	26	250		---	2.3		
12		9.0	25	250		---	2.3		
13		8.2	22	250		---	2.3		
14		7.1	23	270		110	2.1		
15		7.8	22	270		150	2.0	2.8	
16		5.5	21	290		---	---	4.0	
17		6.8	23	280		---	---	2.0	
18		6.2	25	280		---	---	3.6	
19		6.4	25	280		---	---	3.9	
20		6.0	26	280		---	---	4.6	
21		5.6	23	290				3.5	
22		5.3	23	290				4.4	
23		5.1	24	300				4.6	

Time: 75.0°W.
Sweep: 1.6 Mc to 20.0 Mc in 15 seconds.

Table 51

Ourbes, Belgium (50.1° N, 4.6° E) April 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.2	30	340				<1.6	2.35
01		6.9	29	320					2.35
02		6.4	29	320					2.40
03		5.8	29	320				<1.2	2.35
04		5.6	29	325		---	<1.60	<1.6	2.40
05		5.9	29	285		<119	1.80		2.70
06		6.9	29	250		111	2.55		2.05
07	---	7.8	29	235	---	105	3.00		2.80
08	---	8.7	29	230	---	105	3.35	3.4	2.70
09	(415)	9.6	28	230	(5.6)	105	3.65	3.8	2.65
10	(430)	10.6	27	220	5.8	107	3.80	4.0	2.60
11	(435)	11.0	28	220	6.0	107	3.00	4.0	2.55
12	430	11.2	29	225	6.2	107	3.00	4.0	2.55
13	405	11.2	29	230	6.2	109	(3.80)		2.60
14	390	11.0	28	230	(6.3)	(109)	3.70		2.60
15	370	10.6	28	230	6.1	111	3.55		2.60
16	---	10.2	28	240	---	111	3.15		2.60
17		10.4	29	250		113	2.70		2.70
18		10.4	27	260		<127	2.15		2.75
19		(9.6)	27	260		---	<1.60	<1.6	(2.75)
20		8.5	29	<260				<1.6	2.65
21		8.0	29	275				<1.6	2.50
22		7.4	29	310				<1.6	2.45
23		7.3	29	340				<1.6	2.35

Time: 0.0°.
Sweep: 1.0 Mc to 25.0 Mc in 30 seconds.

Table 52

Freiburg, Germany (48.1° N, 7.6° E) April 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.4	30	335		---	----		2.30
01		7.4	30	315					2.30
02		6.8	30	315					2.40
03		6.2	30	320					2.30
04		6.1	30	320					2.40
05		6.7	30	275		135	1.60	2.2	2.65
06		7.8	30	245		111	2.55	2.8	2.75
07	---	8.7	30	240	----	109	3.10		2.70
08	---	9.8	29	230	----	107	3.45	3.7	2.65
09	(430)	10.7	30	230	6.00	105	3.70	3.9	2.60
10	440	11.4	30	225	6.00	105	3.85	4.1	2.55
11	(440)	11.0	29	230	5.80	105	3.90	4.2	2.55
12	405	12.0	29	230	6.00	105	3.95	4.0	2.50
13	(435)	11.8	29	230	5.90	105	3.90	3.9	2.50
14	(420)	11.4	30	240	6.60	106	3.75		2.50
15	---	11.1	30	240	----	109	3.50		2.55
16	---	11.0	29	245	----	109	3.15	3.2	2.55
17		10.9	30	250		113	2.60	2.7	2.65
18		10.6	30	255		130	1.90	2.0	2.70
19		10.0	30	260				1.5	2.60
20		8.8	30	260					2.55
21		8.3	30	280					2.40
22		7.9	30	310					2.40
23		7.7	30	340					2.30

Time: 0.0°.
Sweep: 1.25 Mc to 20.0 Mc in 3 minutes.

Table 53

Paramaribo, Surinam (5.8° N, 55.2° W) April 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		15.5	28	340				3.8	2.50
01		15.3	28	300				3.6	2.65
02		14.3	28	275				3.1	2.75
03		12.6	28	250				3.1	2.85
04		11.6	28	260				3.0	2.75
05		10.5	27	250				2.6	2.80
06		10.0	27	250				2.6	2.80
07		8.9	27	250				3.0	2.85
08		7.6	27	245				2.7	2.75
09		7.6	27	275		---	---	3.1	2.60
10		10.1	27	260		130	2.2	4.5	2.90
11		12.4	27	250		100	3.2		2.90
12		13.5	28	240		100	3.8		2.85
13		14.4	27	235		100	4.0	4.4	2.70
14	(370)	15.0	28	240		100	4.4	4.6	2.60
15	400	15.0	26	250	8.6	110	4.5		2.55
16	400	15.0	26	245	8.5	100	4.5		2.55
17	400	15.1	26	250	8.0	110	4.4	4.8	2.45
18	415	14.5	27	<250	8.0	100	4.1	5.2	2.40
19	440	14.0	27	240	7.6	100	3.8	4.9	2.35
20	435	13.6	28	250	7.4	100	3.2	4.7	2.30
21	---	13.2	28	270		150	2.6	5.0	2.30
22		13.1	27	340		---	---	4.8	2.30
23		14.0	28	390				4.4	2.35

Time: 0.0°.
Sweep: 1.4 Mc to 20.0 Mc in 40 seconds.

Table 54

Oecepcion I. (63.0° S, 60.7° W) April 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.4	18	<340					2.30
01		5.9	18	<340					2.20
02		5.4	18	<360					2.30
03		4.9	19	<390					2.20
04		4.5	20	<340					2.20
05		4.7	19	<365					2.35
06		4.5	20	<330					2.40
07	(315)	4.8	18	---	---				2.40
08	230	7.2	20	---	---				2.80
09	205	9.1	19	---					3.00
10	205	11.3	19	---					3.10
11	200	13.8	18	---					3.10
12	200	14.0	15	---					3.00
13	200	14.7	11	---					3.10
14	200	14.3	16	---					3.05
15	200	14.3	18	---					3.05
16	200	12.2	16	---					3.05
17	200	12.6	17	---					3.10
18	200	12.2	16	---					3.10
19		10.5	17	200					3.10
20		8.4	15	<210					2.95
21		7.8	18	230					2.80
22		6.7	19	<255					2.55
23		6.6	21	<295					2.40

Time: 45.0°W.
Sweep: 1.3 Mc to 18.0 Mc in 30 seconds.

Table 55

Port Lockroy (64.8° S, 63.5° W) April 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.0	28	360			---		2.15
01		4.9	24	<375			---		2.15
02		4.7	26	<380			---		2.15
03		4.2	24	380			---	1.0	2.15
04		3.9	25	395			---		2.20
05		(4.0)	26	395			---	0.9	(2.15)
06		4.2	26	375			---		2.30
07		>5.4	26	275			---	1.3	2.55
08		7.0	28	250			1.8	1.9	<2.80
09		10.0	29	240			2.2	2.5	3.00
10		12.4	28	230			2.5	2.8	2.95
11		13.8	29	225			2.8	2.8	2.90
12		14.4	28	225			2.8		<2.95
13		13.9	29	225			2.8		2.95
14		13.8	28	225			2.7		3.00
15		12.5	29	225			2.4		3.00
16		12.2	29	230			2.0		3.00
17		11.5	29	240			1.8		3.05
18		10.3	29	225			---	1.2	3.00
19		8.6	26	225			---	1.1	2.95
20		>6.9	27	245			---	0.9	2.70
21		6.4	28	260			---		(2.45)
22		6.0	26	310			---		2.30
23		5.3	27	350			1.1		2.20

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 56

Poitiers, France (46.6° N, 0.3° E) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(7.2)	30	<325					2.35
01		6.8	30	<325					2.40
02		(6.4)	30	<340					2.30
03		(6.0)	29	<350					2.30
04		(5.8)	30	<325					2.40
05		(5.4)	30	<300					2.40
06		6.0	30	275		---	1.60		2.60
07		(8.0)	30	250		120	2.40		2.80
08	---	>9.9	30	245	---	110	2.90	2.9	2.90
09	(330)	(11.8)	30	240	(5.6)	110	3.30	3.5	2.80
10	(315)	12.8	31	235	(5.2)	110	3.60		2.70
11	(315)	>13.0	30	<240	(6.9)	110	3.70		2.70
12	(340)	>13.5	31	240	(6.8)	110	3.90		2.60
13	290	(13.5)	31	240	(6.2)	110	3.80		2.65
14	(325)	13.1	31	240	(7.0)	110	3.70		2.70
15	---	12.9	31	245	(6.5)	110	3.45		2.65
16	---	(12.5)	31	250	---	115	3.05		2.70
17		(12.2)	31	250		120	2.50	2.6	(2.80)
18		(11.6)	30	245		---	E	1.9	----
19		>10.0	30	245		---	E		
20		>9.0	30	<245					----
21		>8.0	30	260					----
22		>7.5	30	(280)					(2.50)
23		(7.4)	30	<315					(2.45)

Time: 0.0°.
Sweep: 1.6 Mc to 17.0 Mc in 1 minute.

Table 57

Rabat, Morocco (30.9° N, 6.8° W) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.6	19	<285					2.60
01		(8.4)	20	<300					2.65
02		8.2	22	<300				1.8	(2.45)
03		(7.8)	21	<300					(2.50)
04		7.5	21	<295					2.50
05		7.1	21	<295					2.55
06		6.6	20	<280					2.60
07		7.7	21	250		130	2.10		3.00
08	---	9.4	21	235		115	2.90		3.05
09	(260)	12.1	20	230	---	110	3.30		2.90
10	(300)	13.2	25	230	---	105	3.55		2.90
11	(290)	14.0	25	240	---	105	3.80		2.80
12	(300)	14.0	28	240	---	105	3.90		2.70
13	(350)	14.0	26	240	---	110	4.05		2.65
14	(350)	13.9	25	240	---	110	4.00		2.60
15	350	13.2	25	245	---	110	3.80		2.60
16	(350)	>13.0	27	250		110	3.60		2.60
17	---	12.8	25	250		110	3.05	3.6	2.65
18	---	(12.3)	25	255		120	2.20	3.5	2.70
19		>11.0	21	<255		---	----	3.4	(2.80)
20		(9.8)	24	<250				2.6	(2.75)
21		9.5	23	<275				2.0	(2.70)
22		9.0	22	<280					(2.70)
23		(8.8)	21	<280					(2.70)

Time: 0.0°.
Sweep: 1.6 Mc to 17.0 Mc in 1 minute.

Table 58

Tamanrasset, French W. Africa (22.8° N, 5.5° E) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>16.4	28	250		---	E	2.0	(2.80)
01		>15.0	27	250		---	E	2.0	(2.90)
02		13.0	26	240		---	E	2.2	3.10
03		>9.5	29	240		---	E	2.3	(2.90)
04		>7.6	26	240		---	E	2.2	2.60
05		7.0	27	265		---	E	2.2	(2.75)
06		8.5	28	270		---	1.90	3.1	(2.80)
07		11.6	28	245		110	2.80	3.1	3.05
08		14.1	25	240		105	(3.35)	3.8	3.05
09		15.3	26	235		105	(3.75)	4.2	2.95
10		15.5	27	225		105	(4.00)		2.80
11	---	15.7	25	220		105	----		2.70
12	(400)	>16.0	27	<225		105	(4.20)		2.60
13	430	>16.5	26	<225		105	(4.20)		(2.60)
14	410	0	27	230	---	105	(4.00)		----
15	(395)	>16.4	26	240		105	(3.80)		(2.60)
16	<400	0	24	250		105	3.20	3.3	----
17		>16.0	23	260		115	2.40	3.1	----
18		>16.0	23	295		---	E	2.2	
19		0	25	345		---	E	2.1	----
20		0	22	300		---	E	2.0	----
21		0	25	285		---	E	2.0	----
22		0	25	260		---	E	1.9	----
23		0	27	250		---	E	2.0	(2.85)

Time: 0.0°.
Sweep: 1.2 Mc to 17.0 Mc in 1 minute.

Table 59

Dakar, French W. Africa (14.7° N, 17.4° W) March 1950

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		----	0	270					
01		(14.0)	1	240					----
02		----	0	220					
03		(10.0)	9	210					(3.00)
04		(7.3)	13	210					(2.85)
05		6.4	19	220		---	----		(2.80)
06		6.2	26	<230		---	----		2.85
07		7.6	26	240		---	1.35		2.90
08		(12.7)	10	230		110	2.40	2.6	(3.10)
09		(14.8)	4	220		100	3.20		----
10		(16.0)	5	210		100	(3.65)		----
11		(15.7)	6	200		95	4.00		(2.90)
12		(15.5)	1	200		95	----		----
13	---	(15.3)	3	195		95	----		----
14	---	(15.7)	2	<200		100	----		----
15	---	(15.8)	4	<200		100	----		----
16	---	(15.8)	2	215		100	3.90		----
17		(14.0)	3	220		100	3.40		----
18		(14.0)	2	230		105	2.90		----
19		(13.6)	1	260		130	2.00		----
20		----	0	360		---	E		
21		----	0	375					
22		----	0	330					
23		----	0	310					

Time: 0.0°.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes.

Table 60

Djibouti, French Somaliland (11.6° N, 43.2° E) March 1950*

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(9.9)	2	260		---	----	2.2	----
01		>10.0	4	245		---	----	2.1	----
02		(9.0)	8	240		---	----	2.1	(2.75)
03		8.6	11	245		---	E	2.0	(2.70)
04		8.2	14	240		---	E		2.00
05		7.8	13	230		---	E	2.0	2.95
06		7.4	15	230		---	E	2.4	3.05
07		>10.3	8	265		130	2.45	4.2	(2.90)
08		----	0	250		115	3.30	4.2	
09		(14.0)	1	240		---	3.80	4.5	----
10		(13.4)	1	230		---	4.05	9.8	----
11		(13.1)	2	(225)		---	----	9.5	----
12		>13.9	4	(225)		---	4.30	8.0	----
13		>14.0	3	225		---	4.20	8.4	----
14	---	(13.8)	5	230		---	4.10	8.2	----
15	---	(13.0)	3	235		---	3.90	4.7	----
16	---	----	0	240		---	3.55	6.8	
17	---	----	0	260		---	----	6.1	
18		>10.0	1	290		---	1.85	2.7	
19		>10.0	3	390		---	E	2.2	
20		>10.0	7	(390)		---	E		----
21		>10.0	5	(315)		---	----	2.3	
22		>10.0	4	280		---	----	2.6	
23		(9.4)	1	275		---	----	2.3	

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.
*Observations taken 1 through 18 only.

Table 61

Tahiti, Society Is. (17.7° S, 149.3° W) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		16.2	27	250		---	----	3.1	2.80
01		14.0	27	250		---	E	2.6	2.90
02		11.4	24	250		---	E	2.8	2.65
03		10.3	27	265		---	E	2.8	2.45
04		10.3	25	320		---	(1.00)	2.8	2.55
05		10.0	25	290		---	(1.05)	2.6	2.65
06		11.1	24	295		---	(1.40)	3.1	2.80
07		13.4	28	250		110	2.80	3.2	3.05
08		14.5	27	240		105	3.40	3.8	2.90
09		15.0	26	235		105	3.80	4.0	2.70
10	---	15.9	29	230		100	(4.20)		2.70
11	---	16.4	28	230		105	(4.30)		2.60
12	390	0	28	225	---	105	(4.30)		2.50
13	390	0	27	230	---	105	(4.30)		2.50
14	400	0	28	235	---	105	(4.20)		2.50
15	395	16.3	28	245	---	105	3.95		2.50
16	370	16.0	27	250	---	110	3.50	5.0	2.50
17	---	15.6	28	255		115	2.90	4.4	2.45
18	---	16.2	29	290		---	(1.65)	4.0	2.45
19		0	29	340		---	E	3.7	2.40
20		D	27	310		---	----	3.1	----
21		D	27	270		---	----	3.1	(2.55)
22		0	28	265		---	(1.10)	3.1	(2.60)
23		0	29	255		---	(1.00)	3.1	2.70

Time: 150.0°W.
Sweep: 1.2 Mc to 17.0 Mc in 1 minute.

Table 62

Tananarive, Madagascar (18.8° S, 47.5° E) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		7.8	10	(260)		---	----	2.8	----
01		(7.7)	8	(260)		---	----	3.2	----
02		5.7	11	(250)		---	----	2.0	(2.60)
03		5.3	15	250		---	----	2.6	2.65
04		>5.0	16	300		---	E	1.6	(2.55)
05		4.5	15	310		---	E		2.55
06		>6.7	4	275		---	1.60	2.5	----
07		(12.8)	1	---		---	----		
08		(11.8)	4	---		---	----		----
09		(12.1)	6	---		---	----		----
10		(12.4)	2	---		---	----		----
11		(12.4)	2	---		---	----		----
12		----	0	---		---	----		
13		----	0	---		---	----		
14		----	0	---		---	----		
15	---	(12.2)	6	---		---	----		----
16		(12.0)	9	---		---	3.40	(4.7)	(2.45)
17		>12.0	12	---		115	2.75	4.2	(2.50)
18		(11.6)	5	---		---	----		----
19		(11.5)	3	---					
20		(10.9)	3	---				(2.4)	
21		(8.6)	4	(250)				(2.7)	----
22		(8.7)	6	(250)				(2.2)	(2.65)
23		(8.0)	9	260		---	----	2.7	----

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes.

Table 63

Deception I. (63.0° S, 60.7° W) March 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		6.7	20	<345					2.35
01		6.6	16	(320)					2.35
02		6.0	20	<325					2.35
03		5.4	20	370					2.30
04		5.0	20	<450					2.20
05		4.9	20	(395)					2.25
06		5.2	18	(300)					2.35
07	270	6.0	18	---	---				2.60
08	225	7.0	23	---	---		---		2.80
09	215	7.7	24	---	---		---		2.95
10	<215	8.4	21	---	---		---		3.00
11	200	9.9	20	---	---		---		2.95
12	<205	10.9	20	---	---		---		2.90
13	(210)	10.8	19	---	---		---		2.85
14	210	11.3	23	(200)	---		---		2.95
15	(200)	11.2	22	(200)	---		---		2.90
16	200	10.7	23	---	---				2.95
17	210	10.0	24	---	---				2.95
18	215	10.1	21	---	---				3.00
19		9.4	22	210					3.00
20		8.8	22	225					2.90
21		8.2	24	(230)					2.80
22		7.6	22	<255					2.60
23		7.1	22	(265)					2.40

Time: 45.0°W.
Sweep: 1.3 Mc to 18.0 Mc in 30 seconds.

Table 64

Ojibouti, French Somaliland (11.6° N, 43.2° E) February 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(8.6)	5	250		---	----	2.2	----
01		>10.0	3	250		---	----	2.1	----
02		>9.4	4	240		---	----	2.2	----
03		8.8	10	235		---	----	2.2	(2.95)
04		8.2	15	225		---	E	2.2	3.00
05	---	6.9	20	220	---	---	E	2.1	3.10
06	---	5.5	22	225	---	---	E	2.1	3.20
07	---	9.0	16	270	---	130	2.10	2.4	2.90
08	---	(12.6)	5	250	---	120	3.10	4.4	----
09	---	>13.0	5	230	---	115	(3.60)	4.6	----
10	---	12.5	10	225	---	---	(3.90)	9.3	(2.40)
11	---	12.6	18	220	---	---	4.05	8.6	2.25
12	---	12.9	14	220	---	---	(4.10)	8.8	2.20
13	---	13.2	14	220	---	110	4.20	6.4	2.20
14	---	13.8	11	225	---	110	4.00	4.6	2.20
15	(420)	>14.0	3	230	---	110	3.80	4.0	----
16	(430)	>14.0	2	240	---	110	3.50	4.4	
17	---	(13.9)	2	260	---	115	----	4.5	----
18	---	(10.4)	1	290	---	---	----	3.9	----
19		>11.2	8	380		---	E	2.1	----
20		>9.0	3	350		---	E	2.1	
21		>10.0	4	290		---	E	2.2	
22		>9.0	4	270				2.1	----
23		>9.7	4	260				2.2	----

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 65

Tsumeb, South W. Africa (19.2° S, 17.7° E) February 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	fEs	(M3000)F2
00		7.48	28	260				2.8	2.68
01		6.92	28	250		---	----	2.8	2.70
02		6.02	28	250		---	----	2.4	2.65
03		5.60	27	268		---	----	3.1	2.65
04		5.02	26	272		---	----	2.8	2.65
05		4.72	26	278		---	----	2.7	2.65
06		7.20	27	255		---	1.98	3.6	2.90
07		9.55	27	238	----	105	2.92	3.7	3.00
08		10.65	27	225	----	105	3.45	4.1	2.90
09	---	11.40	27	220	----	105	3.80	4.4	2.70
10	---	12.07	26	215	----	105	4.10	4.4	2.55
11	(375)	12.70	27	210	(6.70)	---	4.22	4.4	2.50
12	375	13.05	27	210	6.80	---	4.30		2.50
13	390	13.15	27	215	6.70	---	4.20	4.4	2.50
14	390	13.02	27	225	6.60	---	4.15	4.5	2.45
15	(395)	12.70	27	230	6.45	---	3.90	4.4	2.45
16	---	12.45	27	230	----	105	3.55	4.2	2.50
17	---	12.30	27	250	----	110	3.05	4.0	2.55
18		12.25	28	265		---	2.20	3.3	2.65
19		11.75	28	250		---	E	2.8	2.70
20		11.10	27	250		---	----	2.8	2.75
21		10.18	27	250		---	----	2.8	2.75
22		9.18	28	255				2.8	2.75
23		8.30	27	260				3.0	2.70

Time: 15.0°E.
Sweep: 1.0 Mc to 16.0 Mc in 4 minutes.

Table 66

Poitiers, France (46.6° N, 0.3° E) January 1958

Time	h'F2	foF2—Count		h'F	foF1	h'E	foE	foEs	(M3000)F2
00		5.9	30	<305					2.50
01		5.8	30	<310					2.50
02		(5.5)	31	<310					2.40
03		(5.3)	31	<300					2.50
04		(4.6)	30	<285					(2.60)
05		4.3	31	<265					2.65
06		(4.1)	31	<275					2.60
07	---	(5.4)	31	<245	---				2.60
08	---	(10.0)	30	230	---	145	2.00	2.4	----
09	(250)	>13.0	31	235	---	<120	2.60	2.9	----
10	250	>14.0	31	230	---	110	3.10	3.1	----
11	(260)	>14.0	31	225	---	110	3.30		----
12	260	(14.0)	30	225	---	110	3.40		(2.80)
13	260	(14.0)	30	225	---	110	3.35		----
14	---	>13.5	31	230	---	110	3.10		(2.75)
15	(275)	>13.0	31	230	---	110	2.80		----
16	---	12.4	31	235	---	<130	2.15	2.5	----
17		(11.7)	31	230		---	E		
18		(9.2)	31	<225		---	E		
19		(8.0)	31	230					----
20		(7.0)	31	<250					2.60
21		(6.6)	30	<270					(2.70)
22		(6.2)	30	<275					2.50
23		(6.0)	30	<290					2.55

Time: 0.0°.
Sweep: 1.6 Mc to 17.0 Mc in 1 minute.

Table 67

Dakar, French W. Africa (14.7° N, 17.4° W) January 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		(14.7)	1	250				4.2	
01		(16.0)	1	240				3.5	----
02		(11.9)	10	220				3.5	(2.90)
03		(10.0)	9	210				3.5	(2.75)
04		8.8	14	215				3.4	3.00
05		(7.4)	17	225		---	----	>3.8	(2.95)
06		6.1	17	230		---	----	>3.5	3.10
07		4.6	21	240		---	E	3.5	2.95
08		10.6	12	250		120	2.10	4.2	3.05
09		(15.4)	18	230		105	3.00	4.6	3.10
10		(15.7)	17	220		100	3.60	4.6	(3.05)
11		(15.2)	14	210		100	3.90	4.6	(2.80)
12	(450)	(15.4)	15	200	---	95	4.10	4.4	(2.60)
13	(450)	(15.7)	15	195	---	100	4.20	5.0	(2.45)
14	(450)	(15.6)	9	200	---	100	4.15	4.9	(2.35)
15	(480)	(15.3)	10	210	---	100	4.00	4.6	(2.40)
16	(495)	(15.0)	3	220	---	100	3.85	4.6	----
17		----	0	230		105	3.30	4.5	
18		----	0	255		110	2.65	4.4	
19		(14.4)	2	300		---	(1.80)	4.0	
20		(14.7)	3	390		---	E	3.3	----
21		(13.6)	2	370				3.1	----
22		(14.4)	1	315				3.4	
23		(15.0)	2	260				3.6	----

Time: 0.0°.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes.

Table 68

Ojibouti, French Somaliland (11.6° N, 43.2° E) January 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		>9.0	3	260				2.5	----
01		>9.0	6	260		---	----	2.3	----
02		(8.5)	7	250		---	----	2.2	(2.60)
03		8.2	17	240		---	E	2.2	2.85
04		7.9	20	235		---	E	2.1	3.05
05		6.4	27	225		---	E	1.7	3.20
06		5.2	23	230		---	E		3.10
07		8.8	18	260		125	2.20	2.7	3.00
08		(12.6)	11	245		115	3.20	4.0	----
09		>13.5	17	240		110	3.75	4.5	(2.50)
10		(12.8)	11	225		110	4.05	8.3	(2.20)
11	---	>12.6	18	<220		110	4.20	8.6	2.05
12	---	12.6	19	210	---	110	(4.40)	9.0	2.00
13	---	12.4	24	220	---	---	4.30	9.0	2.00
14	---	>11.6	23	230	---	---	4.15	9.0	2.05
15	---	>11.5	10	235		110	3.90	4.7	----
16	---	11.3	7	240		110	3.50	4.7	(1.90)
17		(12.6)	5	265		120	----	4.6	----
18		(12.4)	4	310		---	1.70	4.0	----
19		(9.2)	7	400		---	E		----
20		(8.2)	5	420		---	E		----
21		(8.5)	6	340		---	----	2.1	----
22		>8.9	6	290		---	----	2.2	----
23		>9.0	6	280		---	----	2.2	----

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes, automatic operation.

Table 69

Tahiti, Society Is. (17.7° S, 149.3° W) January 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		9.5	23	325				3.1	2.35
01		8.8	24	335				3.1	2.35
02		8.4	22	345		---	----	3.0	2.35
03		8.5	25	325		---	----	3.1	2.35
04		7.3	26	295		---	----	3.1	2.40
05		7.3	24	300		---	(1.10)	3.0	2.40
06	---	8.4	22	280		110	2.10	3.1	2.55
07	---	10.2	22	250	---	110	3.00	5.5	2.70
08	(380)	11.2	22	245	---	105	3.65	5.0	2.40
09	(450)	12.1	22	240	8.0	105	4.10	5.0	2.30
10	(505)	13.2	21	230	7.8	105	(4.25)	5.2	2.25
11	490	14.8	25	225	7.4	105	(4.50)		2.25
12	475	15.4	26	230	7.0	105	----		2.25
13	450	15.5	27	230	6.8	100	(4.50)		2.30
14	450	14.7	25	225	7.0	100	4.50		2.25
15	465	14.3	26	230	6.7	100	(4.25)		2.25
16	470	13.6	24	240	6.5	100	3.75	5.1	2.25
17	465	13.7	23	250	6.4	105	3.25	3.8	2.30
18	(440)	13.5	21	290		120	2.40	3.1	2.30
19	---	13.0	22	360		---	1.20	3.1	2.30
20		12.0	21	390		---	----	3.1	2.25
21		12.2	25	365				3.1	2.30
22		11.8	26	340				3.1	2.35
23		10.8	22	310				3.1	2.40

Time: 150.0°W.
Sweep: 1.2 Mc to 17.0 Mc in 1 minute.

Table 70

Tananarive, Madagascar (18.8° S, 47.5° E) January 1958

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		8.0	17	<285		---	----	2.7	(2.50)
01		7.5	17	<275		---	E	1.9	(2.50)
02		>6.3	17	<290		---	E	2.6	(2.50)
03		5.8	19	<305		---	E	1.7	(2.40)
04		5.4	20	295		---	E	1.8	(2.50)
05		5.3	19	330		---	E	1.7	(2.40)
06		7.2	10	260		115	2.30	3.0	----
07		>8.9	12	250		110	----	(3.8)	(2.60)
08		---	0	---		<105	----		
09	---	>8.0	1	225	---	100	----	(2.8)	
10	---	---	0	---	---	---	----		
11	---	---	0	---	---	---	----		
12	---	---	0	---	---	---	----		
13	---	---	0	---	---	---	----		
14	---	---	0	---	---	---	----		
15	---	(8.5)	1	---	---	(100)	----	(5.5)	----
16	(440)	(8.8)	1	---	---	105	(3.60)	5.2	----
17	---	(8.8)	2	250	---	110	3.15	3.4	----
18		>9.0	6	285		---	----	2.9	----
19		>9.0	5	300					
20		(8.8)	5	<305					----
21		(8.8)	7	(300)					(2.45)
22		8.5	13	<300					(2.50)
23		8.1	22	290		---	----	3.0	(2.45)

Time: 45.0°E.
Sweep: 1.25 Mc to 20.0 Mc in 10 minutes.

Table 71

Port Lockroy (64.8° S, 63.5° W) June 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		2.3	25					1.1	2.40
01		2.4	24						2.40
02		2.4	25					0.9	2.30
03		2.4	23					0.9	2.40
04		2.4	22					1.0	2.45
05		2.3	24					1.0	2.55
06		2.4	24					1.1	2.55
07		2.3	25					1.1	2.75
08		(3.0)	14					1.4	2.85
09		5.1	12					1.6	(3.10)
10		7.9	17					1.9	(3.30)
11		9.2	22					2.6	3.40
12		9.4	24					2.2	3.40
13		9.1	23					2.2	3.30
14		8.4	23					2.1	3.35
15		(7.3)	19					1.4	3.20
16		6.0	21					1.4	3.30
17		4.8	23					1.3	3.30
18		3.3	20					1.3	3.20
19		2.4	21					1.3	2.90
20		2.2	22					1.3	2.70
21		2.1	24					1.2	2.50
22		2.2	24					1.2	2.40
23		2.3	25					1.2	2.40

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operatio.

Table 72

Port Lockroy (64.8° S, 63.5° W) May 1957

Time	h'F2	foF2	Count	h'F	foF1	h'E	foE	foEs	(M3000)F2
00		2.8	27					1.2	2.40
01		2.7	29						2.35
02		2.6	29						2.35
03		2.6	29						2.35
04		2.6	28						2.40
05		2.4	30					1.0	2.45
06		2.3	27						2.50
07		2.3	29						2.55
08		(5.0)	6					1.3	----
09		7.7	27					1.8	3.20
10		9.7	26					2.6	3.30
11		10.6	29					2.4	3.30
12		11.3	29						3.30
13		10.9	26						3.30
14		10.2	25						3.35
15		9.0	25					1.2	3.30
16		8.6	18					1.3	3.20
17		6.3	25					1.3	3.30
18		5.0	24					1.2	3.30
19		3.6	27					1.1	3.05
20		3.0	25					1.2	2.65
21		2.8	25					1.2	2.40
22		2.8	26					1.2	2.40
23		2.8	29					1.3	2.35

Time: 60.0°W.
Sweep: 0.67 Mc to 25.0 Mc in 5 minutes, automatic operation.

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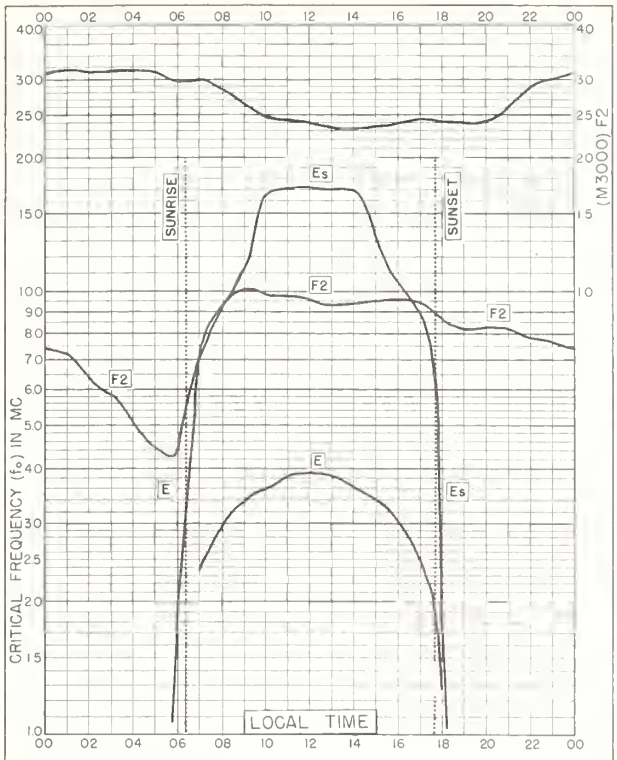


Fig. 1. HUANCAYO, PERU
12.0°S, 75.3°W JUNE 1960

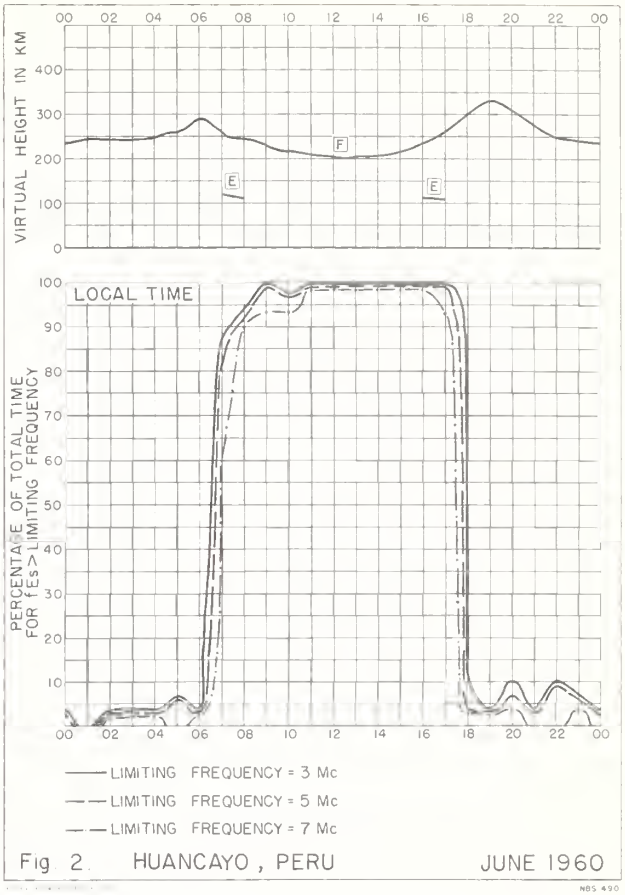


Fig. 2. HUANCAYO, PERU JUNE 1960

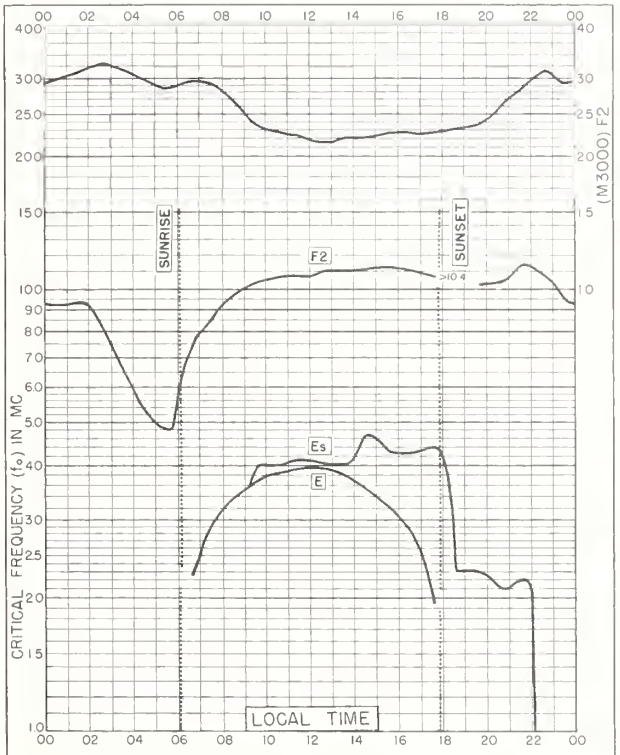


Fig. 3. TALARA, PERU
4.6°S, 81.3°W MAY 1960

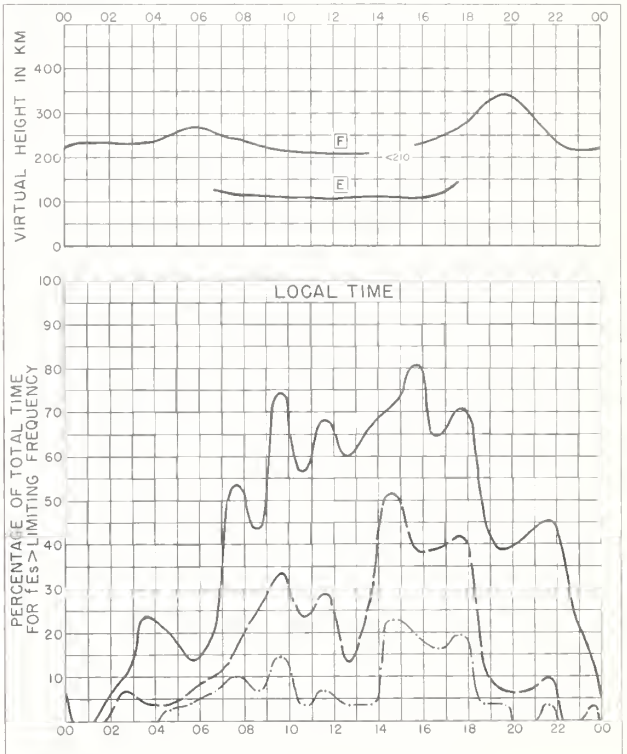


Fig. 4. TALARA, PERU MAY 1960

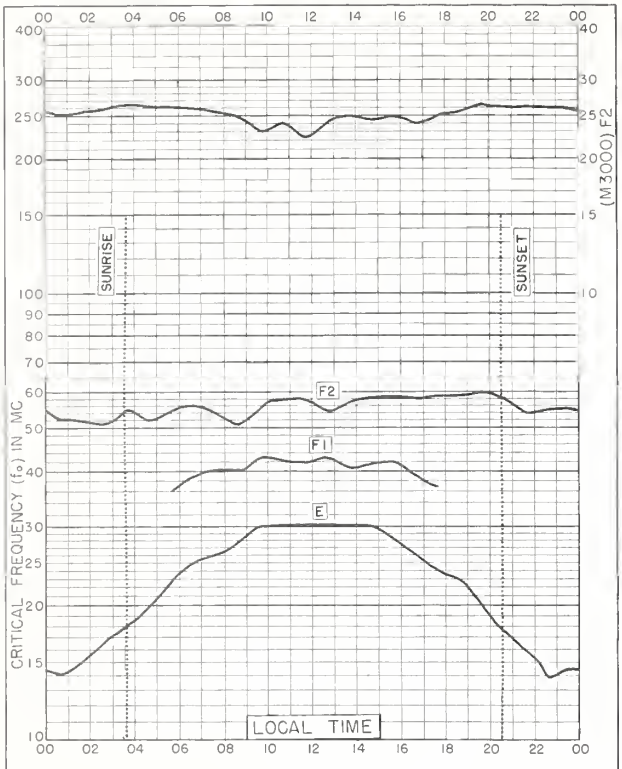


Fig. 5. RESOLUTE BAY, CANADA
74.7°N, 94.9°W APRIL 1960

NBS 503

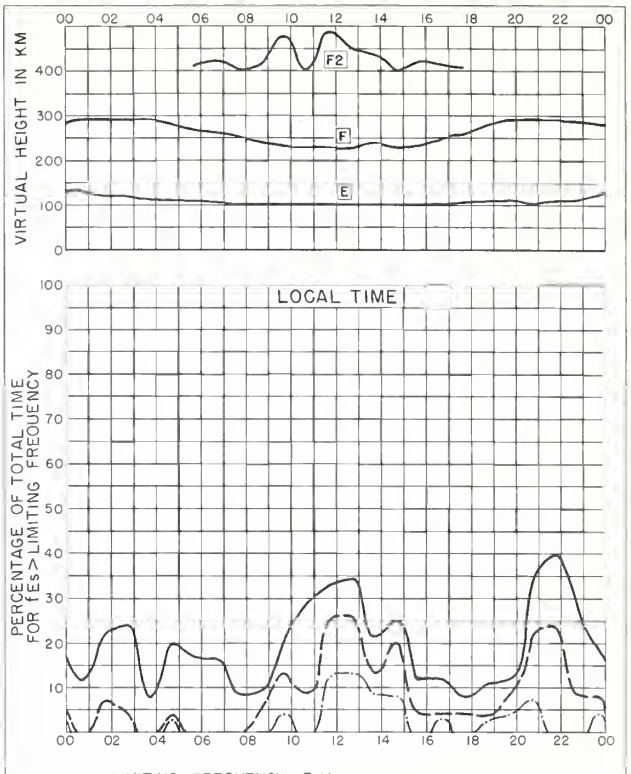


Fig. 6. RESOLUTE BAY, CANADA APRIL 1960

NBS 490

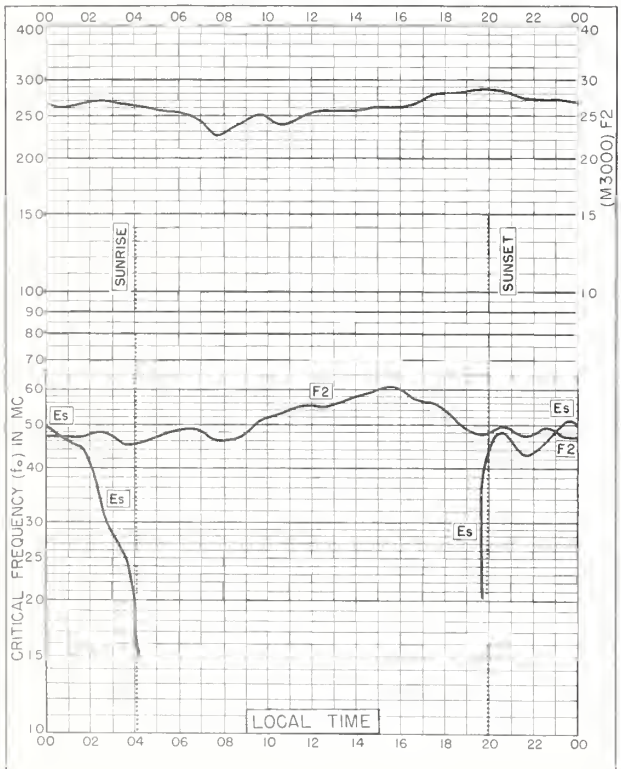


Fig. 7. POINT BARROW, ALASKA
71.3°N, 156.8°W APRIL 1960

NBS 503

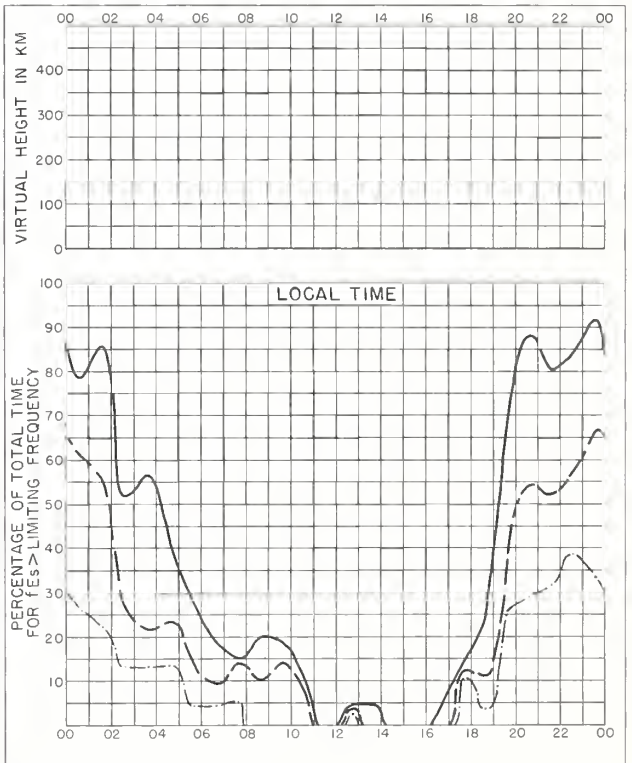


Fig. 8. POINT BARROW, ALASKA APRIL 1960

NBS 490

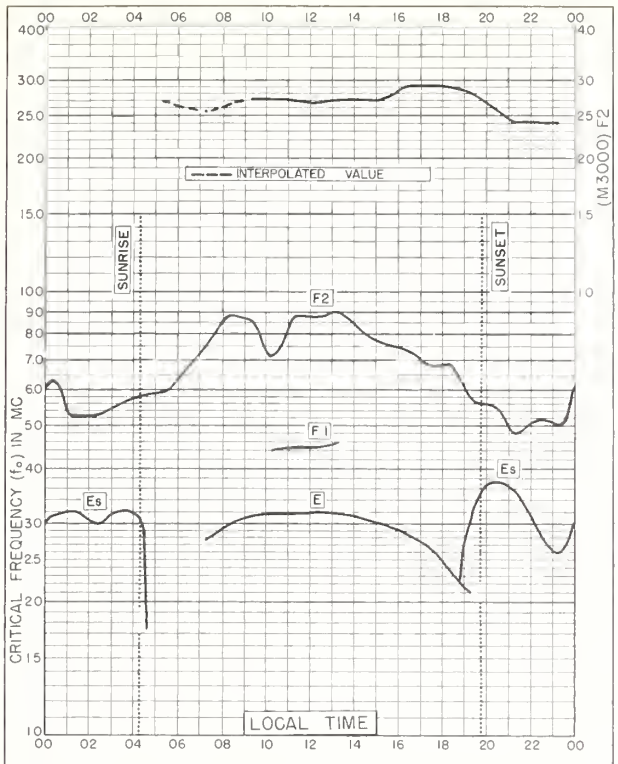


Fig. 9. TROMSO, NORWAY
69.7°N, 19.0°E APRIL 1960

NBS 503

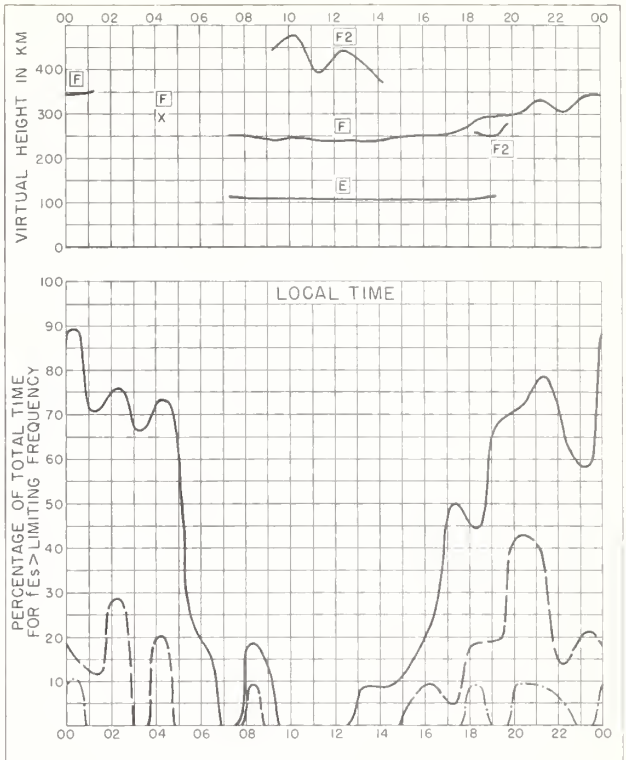


Fig. 10. TROMSO, NORWAY APRIL 1960

NBS 490

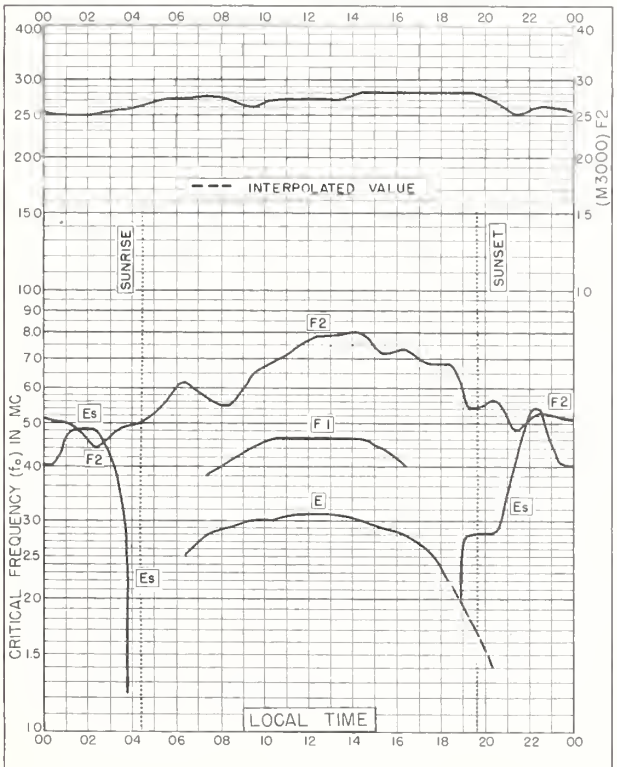


Fig. 11. KIRUNA, SWEDEN
67.8°N, 20.3°E APRIL 1960

NBS 503

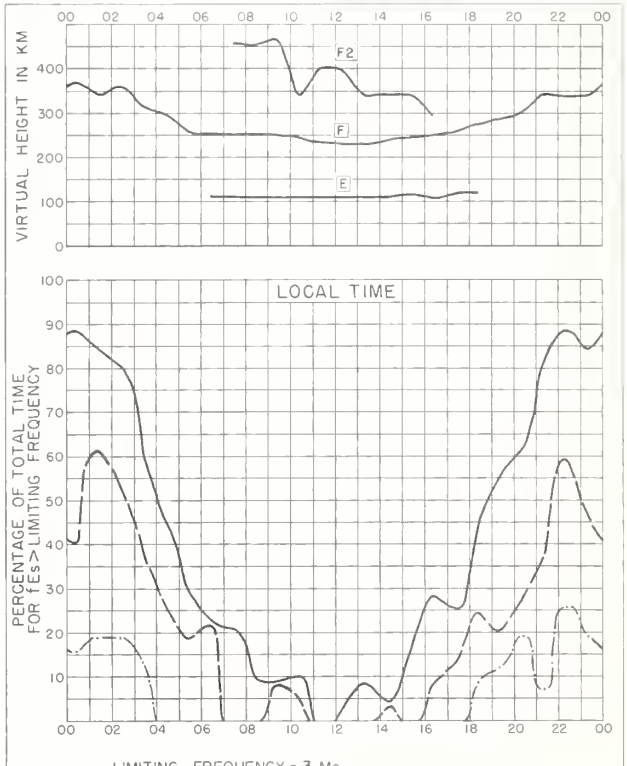


Fig. 12. KIRUNA, SWEDEN APRIL 1960

NBS 490

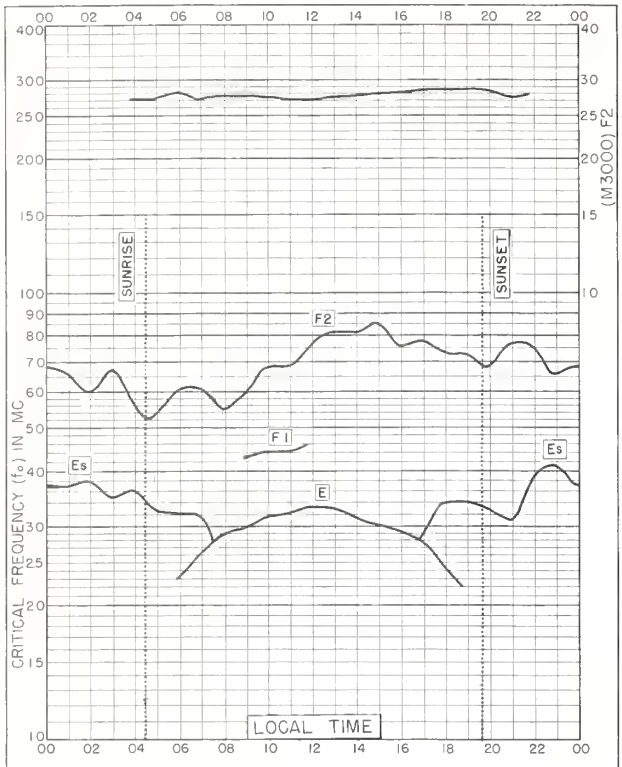


Fig. 13. SODANKYLA, FINLAND
67.4°N, 26.6°E APRIL 1960

NBS 503

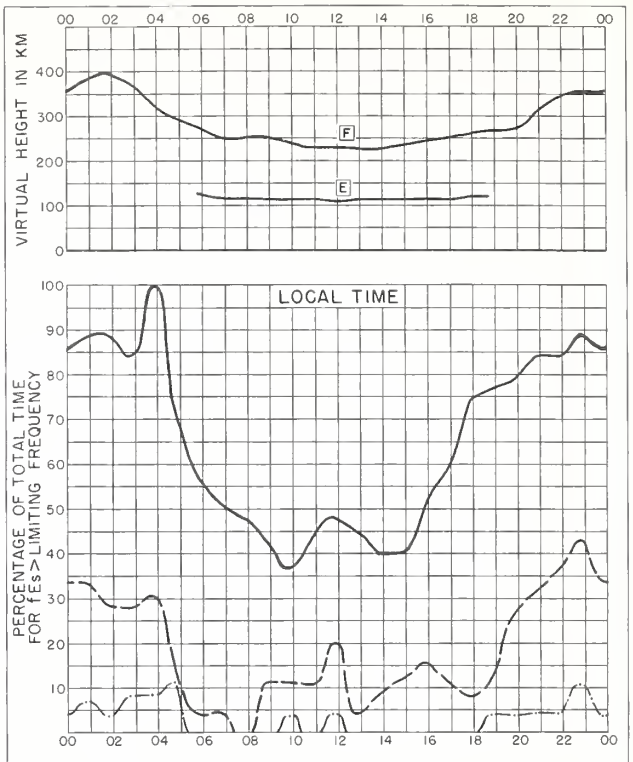


Fig. 14. SODANKYLA, FINLAND APRIL 1960

NBS 490

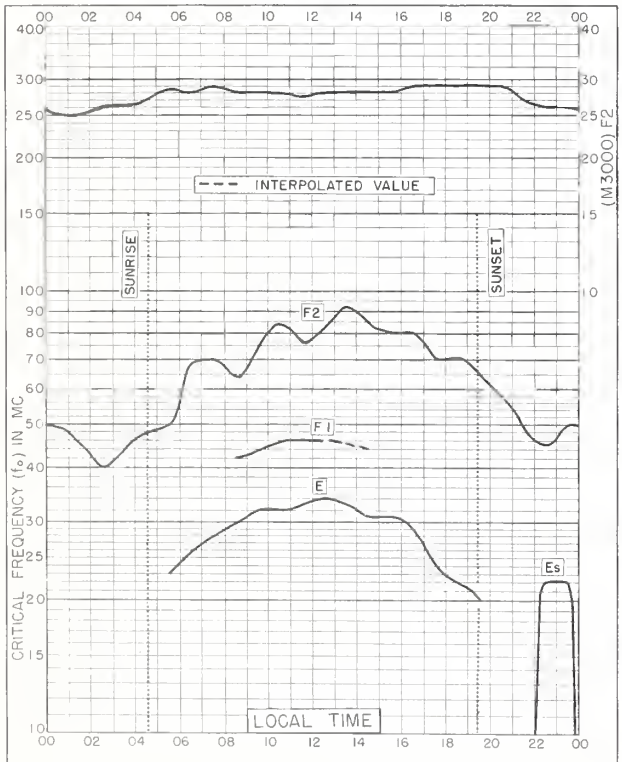


Fig. 15. LULEA, SWEDEN
65.6°N, 22.1°E APRIL 1960

NBS 503

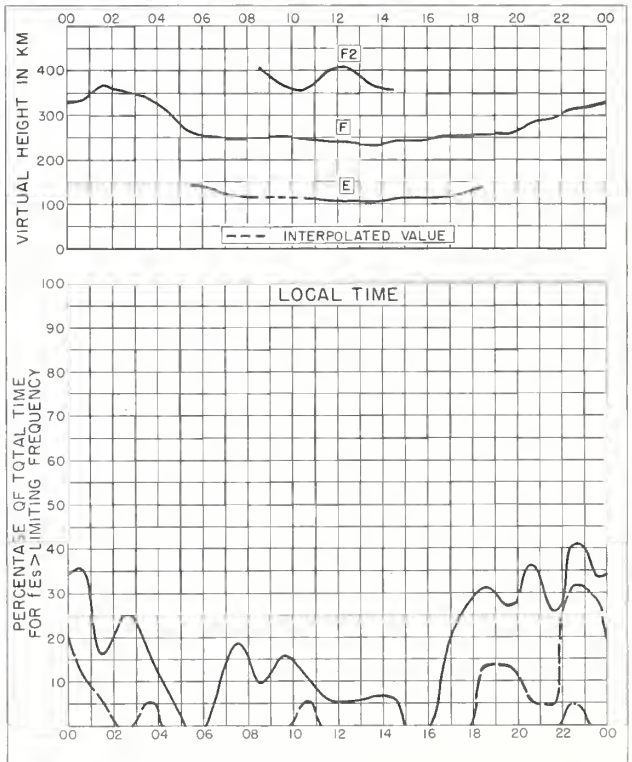


Fig. 16. LULEA, SWEDEN APRIL 1960

NBS 490

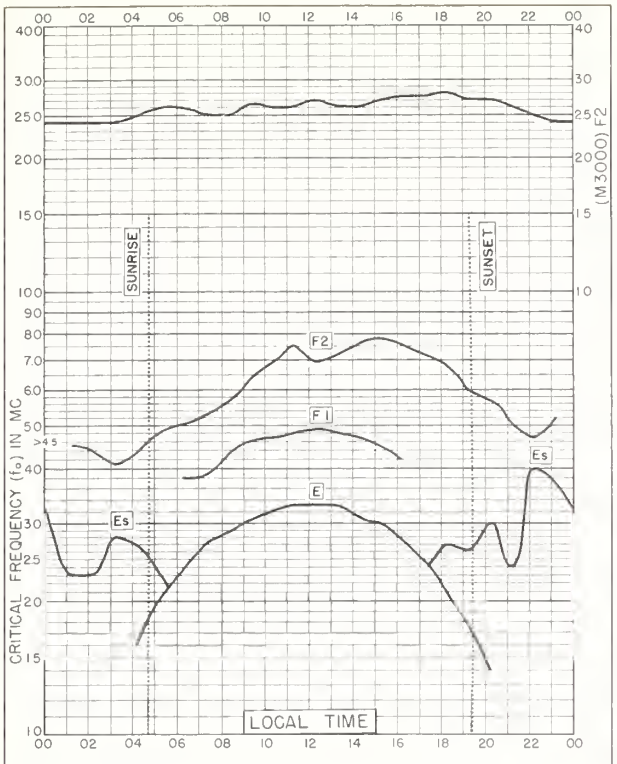


Fig. 17. LYCKSELE, SWEDEN
64.6°N, 18.8°E APRIL 1960

NBS 503

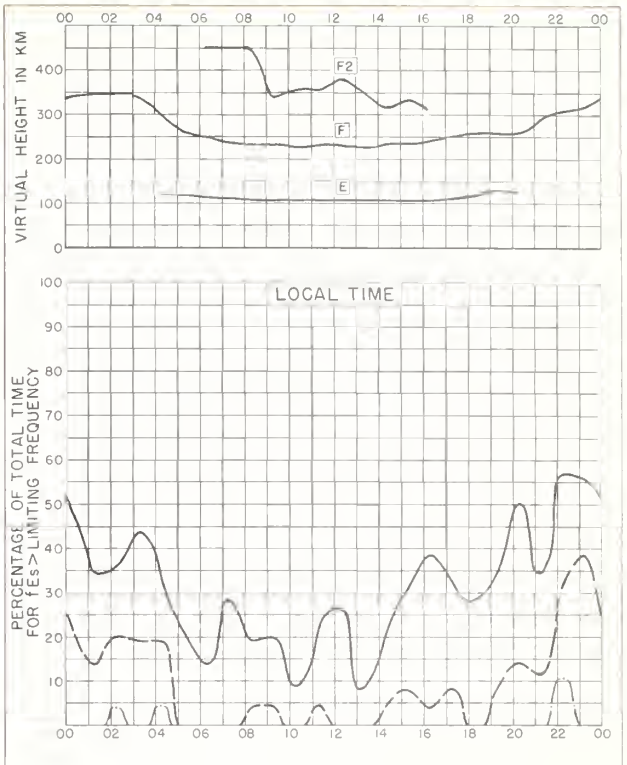


Fig. 18. LYCKSELE, SWEDEN APRIL 1960

NBS 490

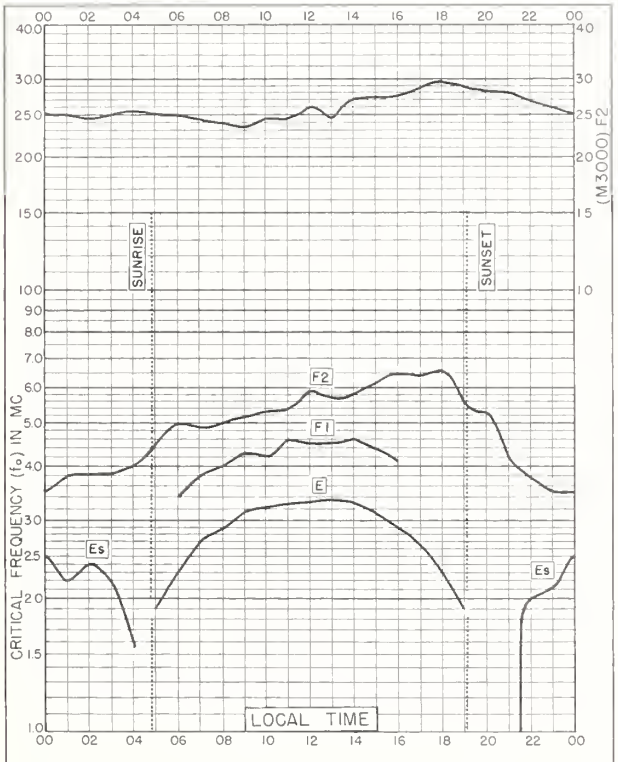


Fig. 19. ANCHORAGE, ALASKA
61.2°N, 149.9°W APRIL 1960

NBS 503

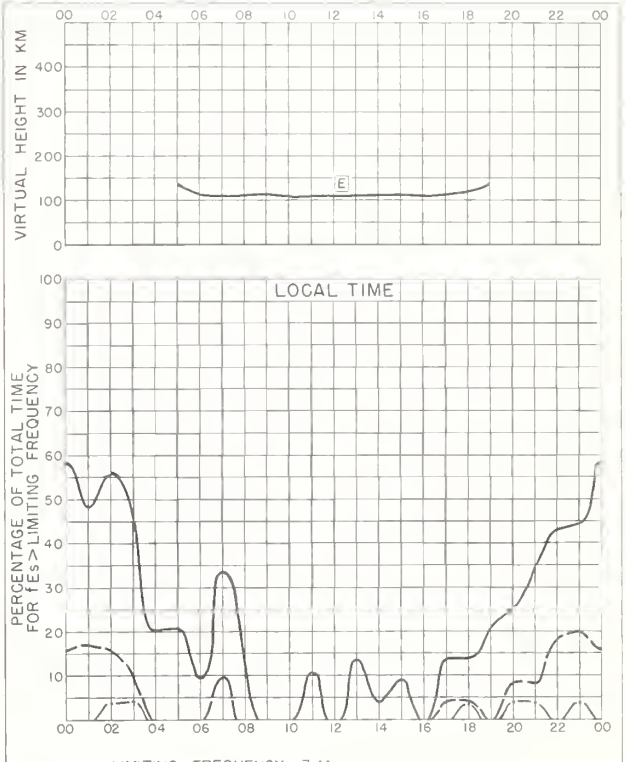


Fig. 20. ANCHORAGE, ALASKA APRIL 1960

NBS 490

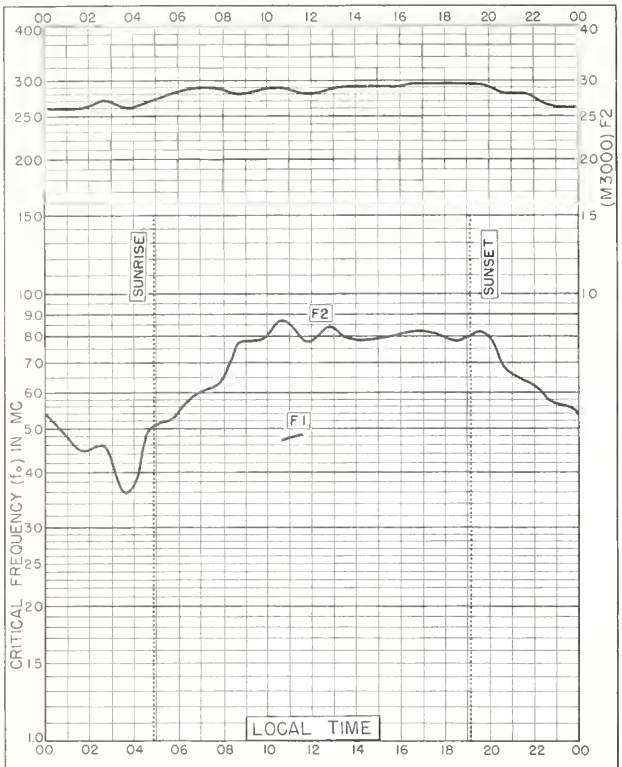


Fig. 21. NURMIJARVI, FINLAND
60.5°N, 24.6°E APRIL 1960

NBS 503

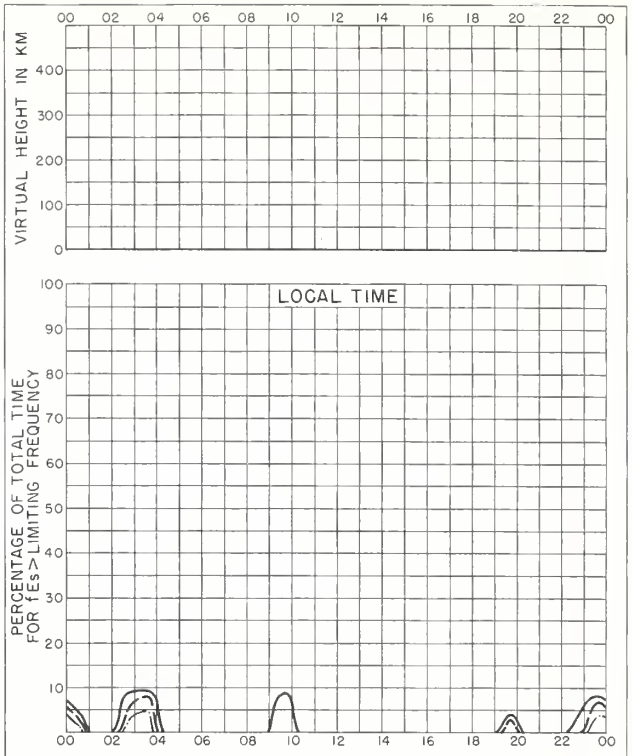


Fig. 22. NURMIJARVI, FINLAND APRIL 1960

NBS 490

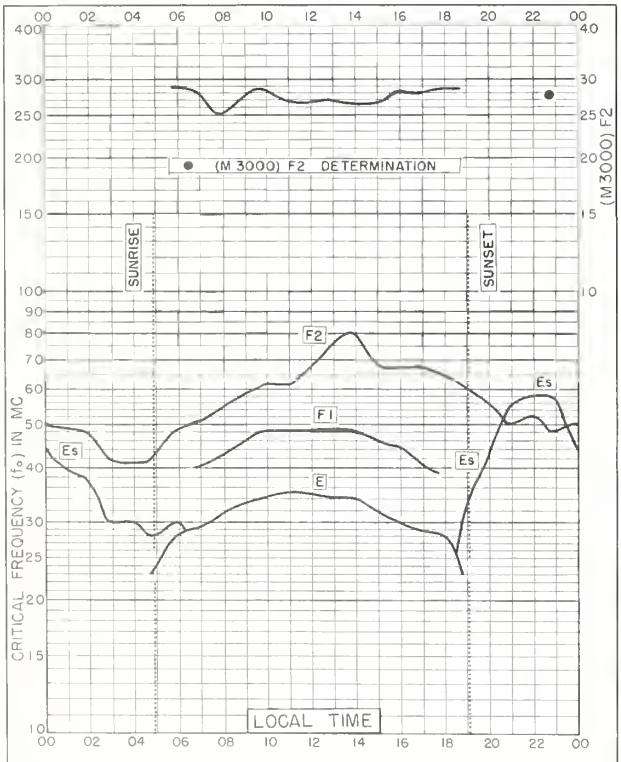


Fig. 23. CHURCHILL, CANADA
58.8°N, 94.2°W APRIL 1960

NBS 503

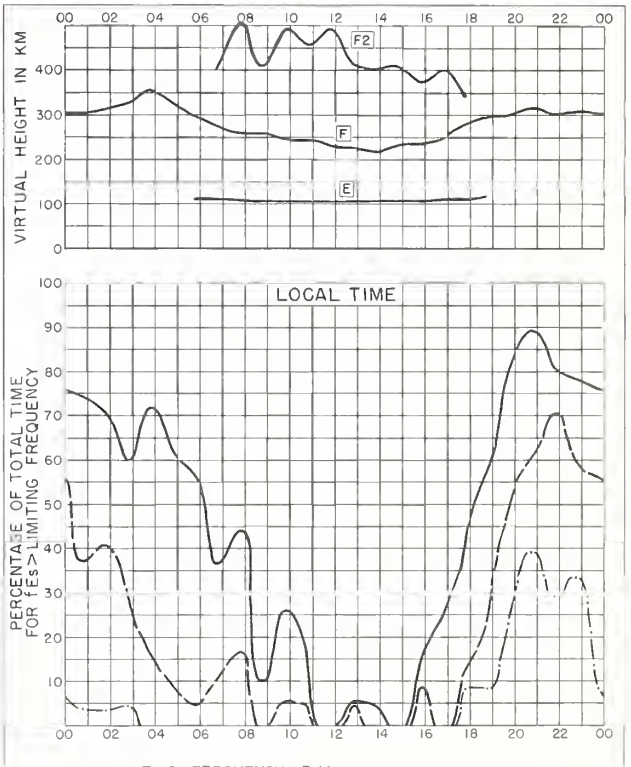


Fig. 24. CHURCHILL, CANADA APRIL 1960

NBS 490

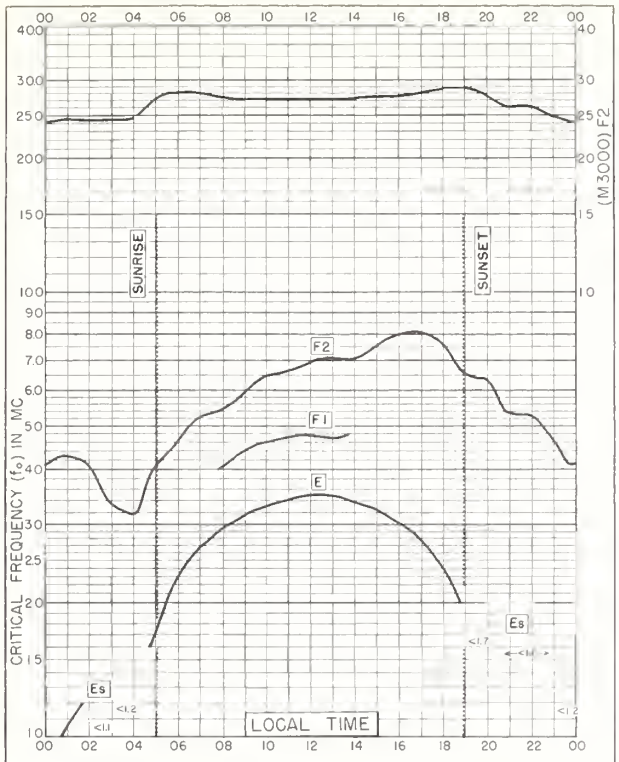


Fig. 25. INVERNESS, SCOTLAND
57.4°N, 4.2°W APRIL 1960

NBS 503

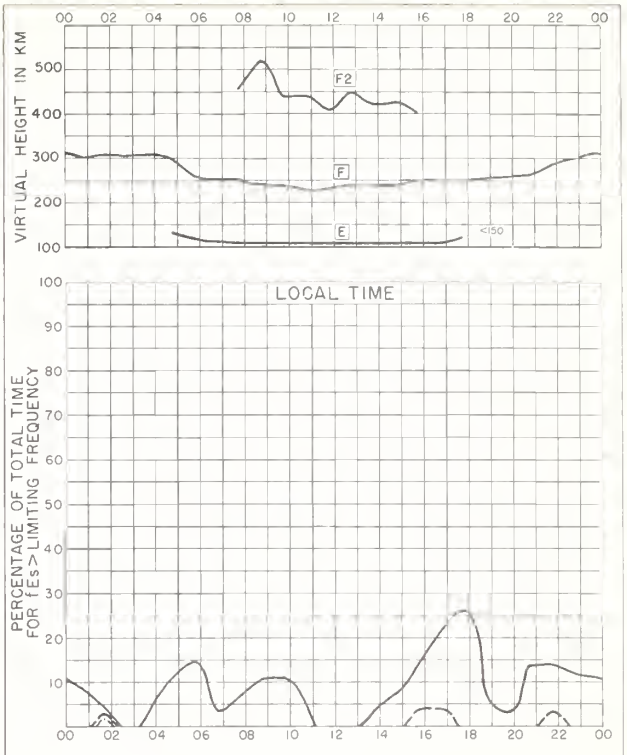


Fig. 26. INVERNESS, SCOTLAND APRIL 1960

NBS 490

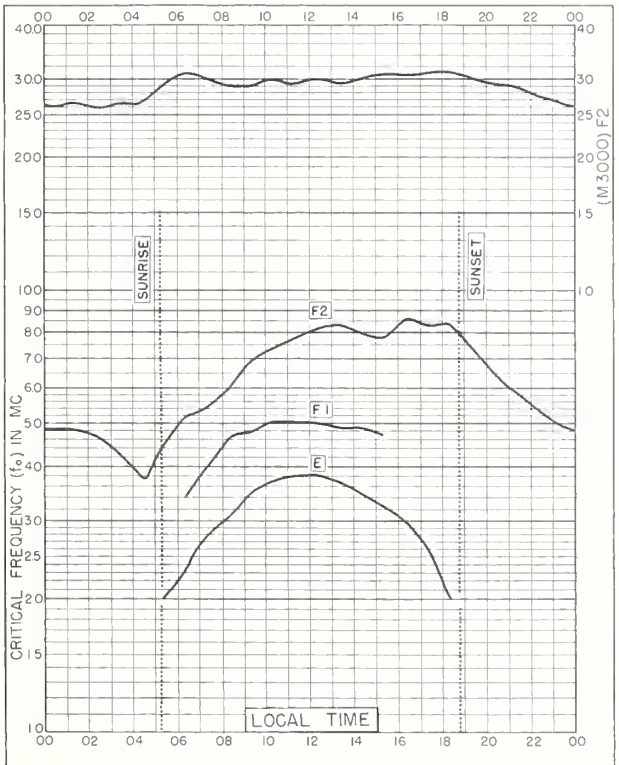


Fig. 27. De BILT, HOLLAND
52.1°N, 5.2°E APRIL 1960

NBS 503

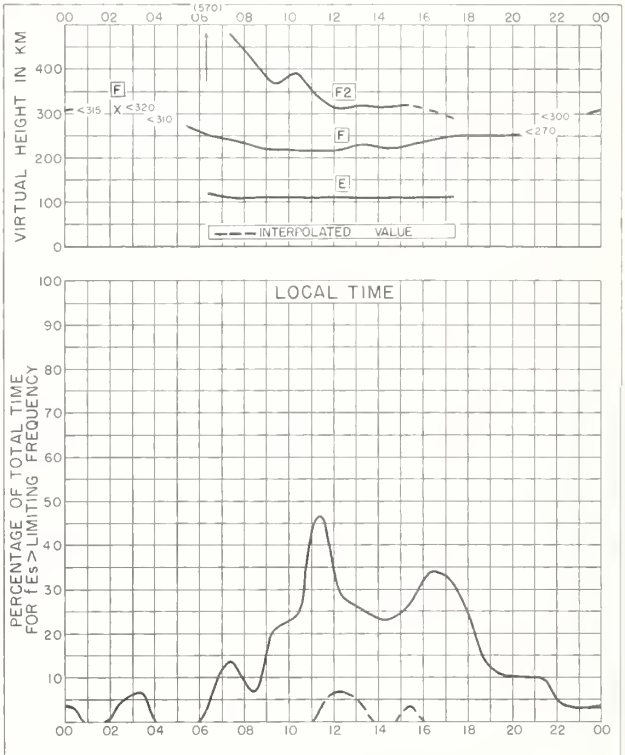


Fig. 28. De BILT, HOLLAND APRIL 1960

NBS 490

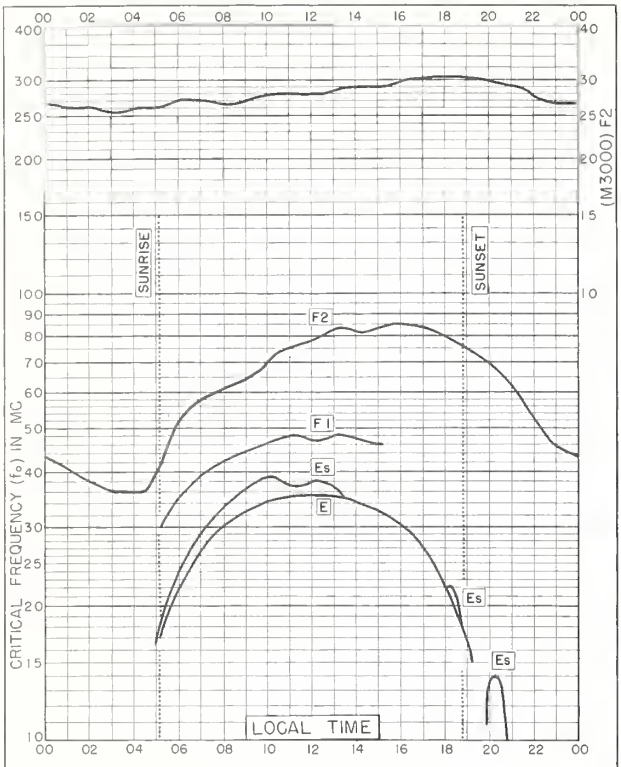


Fig. 29. ADAK, ALASKA
51.9°N, 176.6°W APRIL 1960

NBS 503

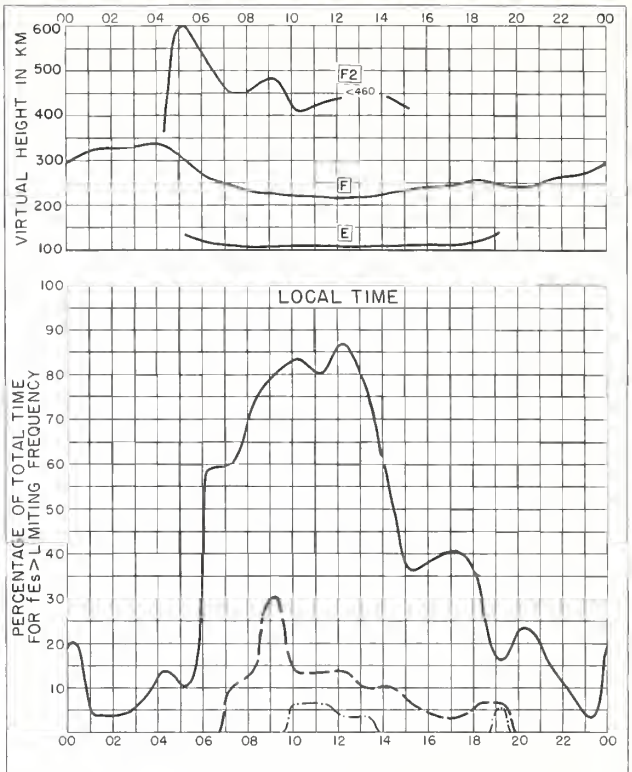


Fig. 30. ADAK, ALASKA APRIL 1960

NBS 490

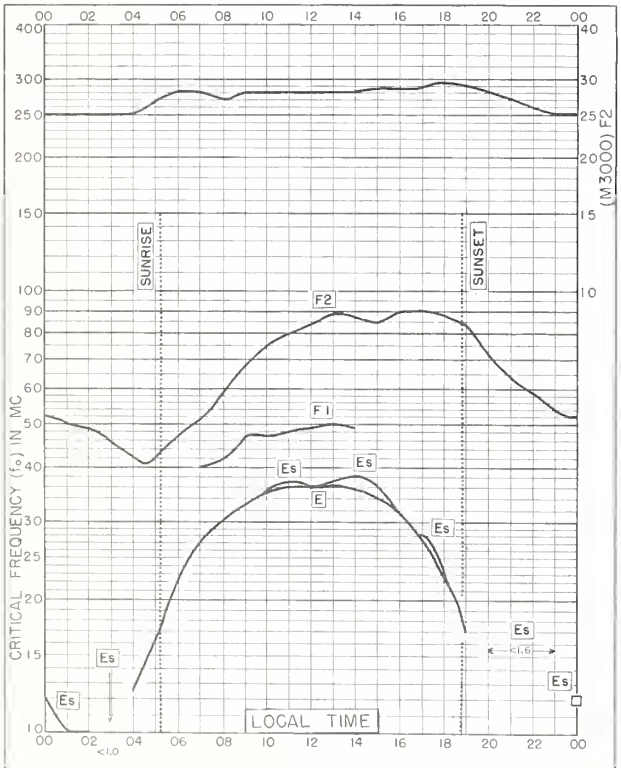


Fig. 31. SLOUGH, ENGLAND
51.5°N, 0.6°W APRIL 1960

NBS 503

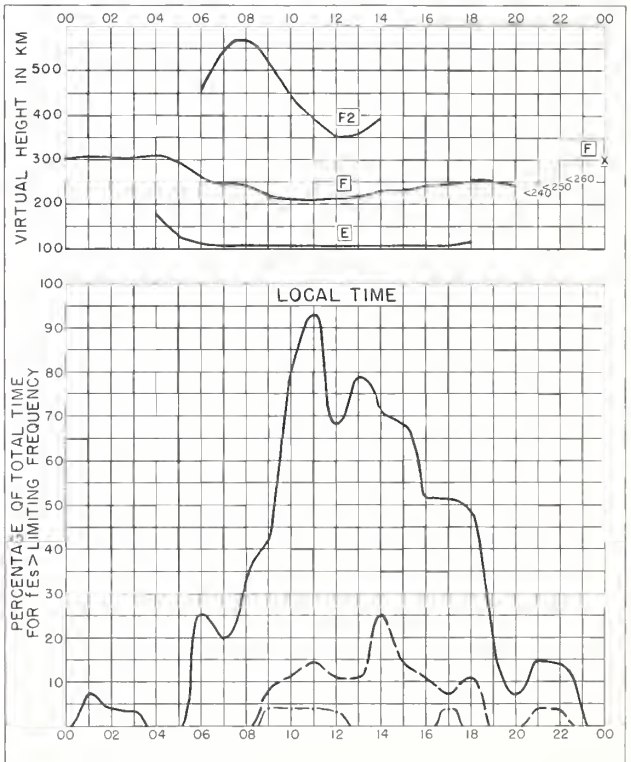


Fig. 32. SLOUGH, ENGLAND APRIL 1960

NBS 490

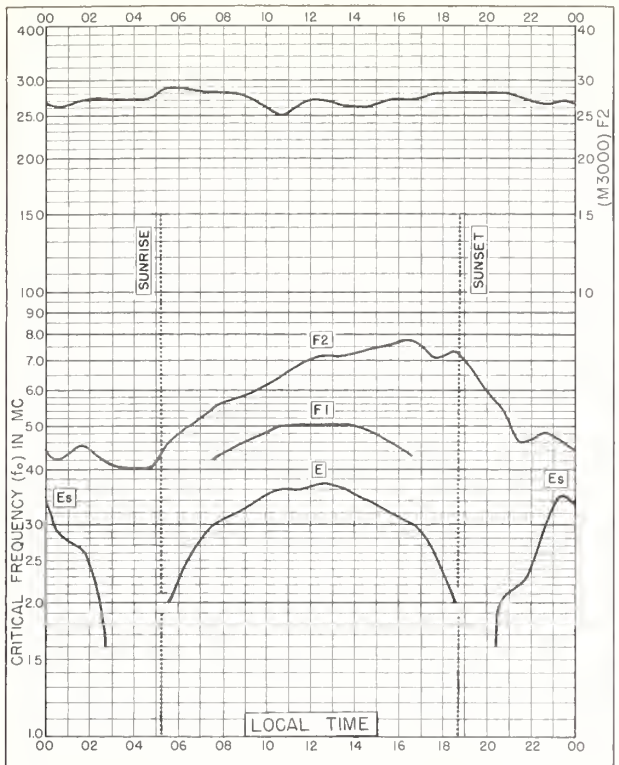


Fig. 33. WINNIPEG, CANADA
49.9°N, 97.4°W APRIL 1960

NBS 503

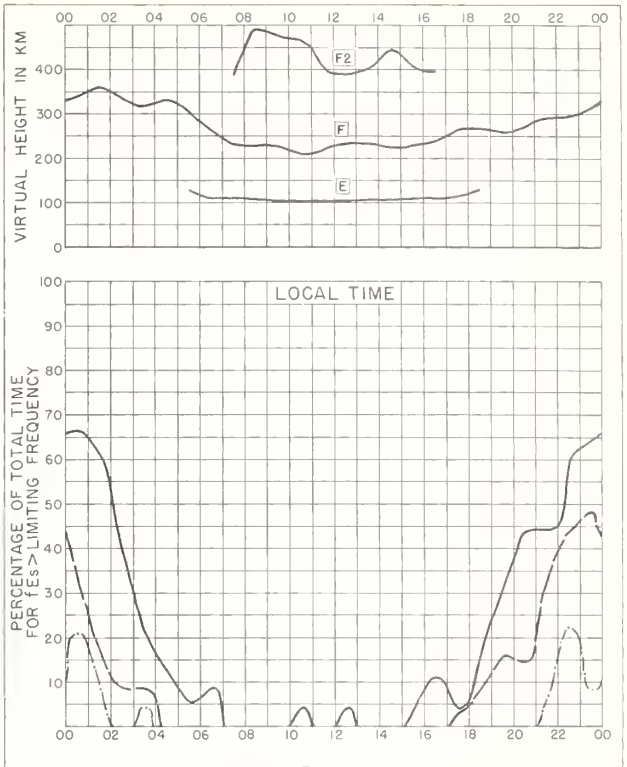


Fig. 34. WINNIPEG, CANADA APRIL 1960

NBS 490

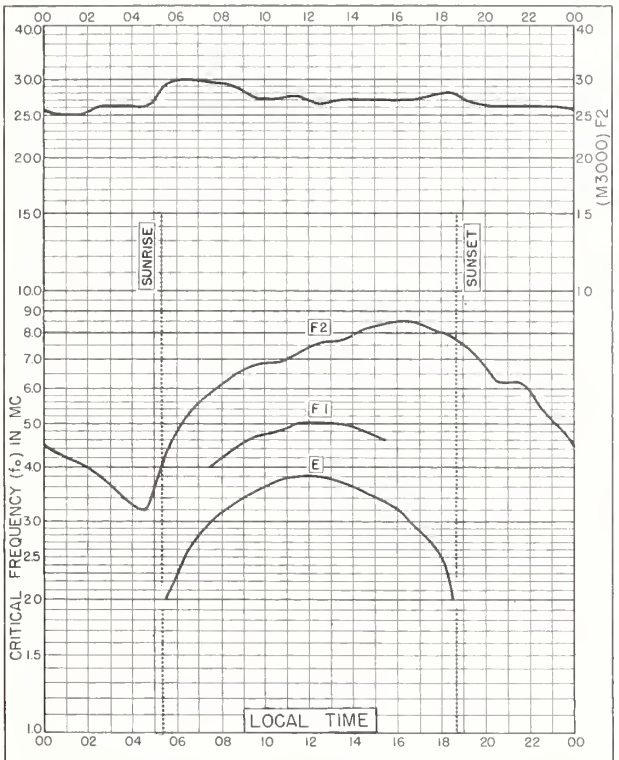


Fig. 35. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W APRIL 1960

NBS 503

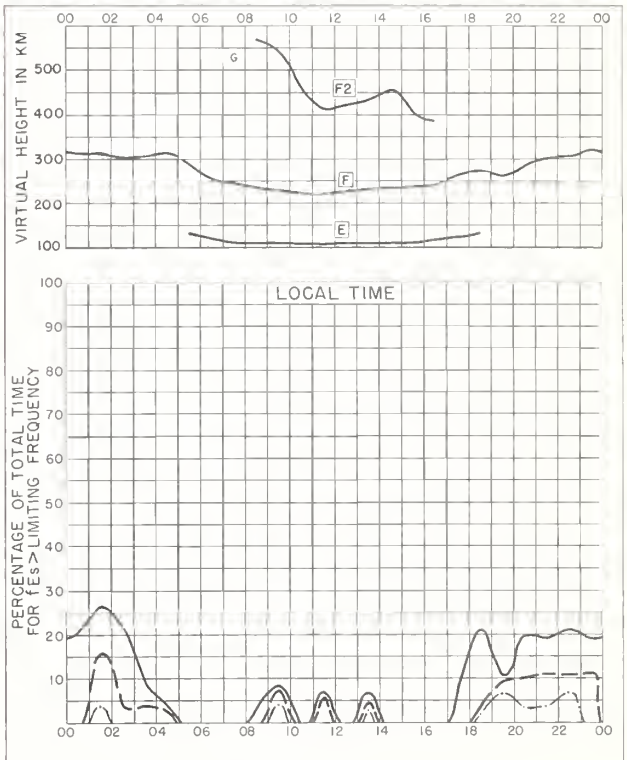


Fig. 36. ST. JOHN'S, NEWFOUNDLAND APRIL 1960

NBS 490

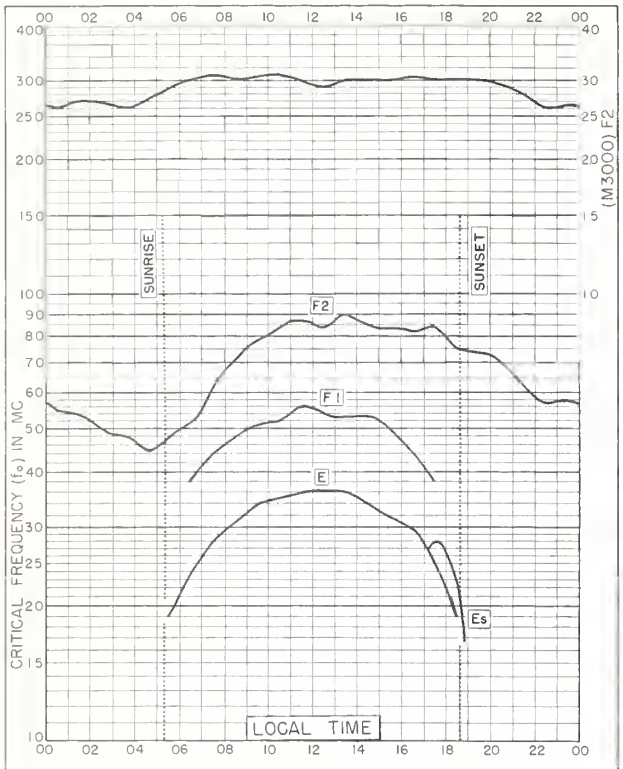


Fig. 37. SOTTENS, SWITZERLAND
46.6°N, 6.7°E APRIL 1960

NBS 503

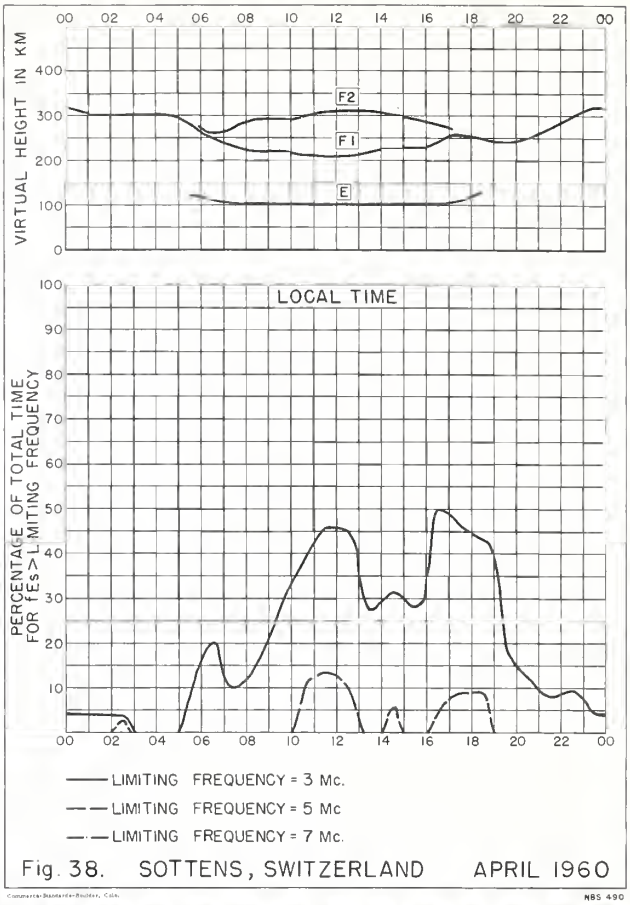


Fig. 38. SOTTENS, SWITZERLAND APRIL 1960

NBS 490

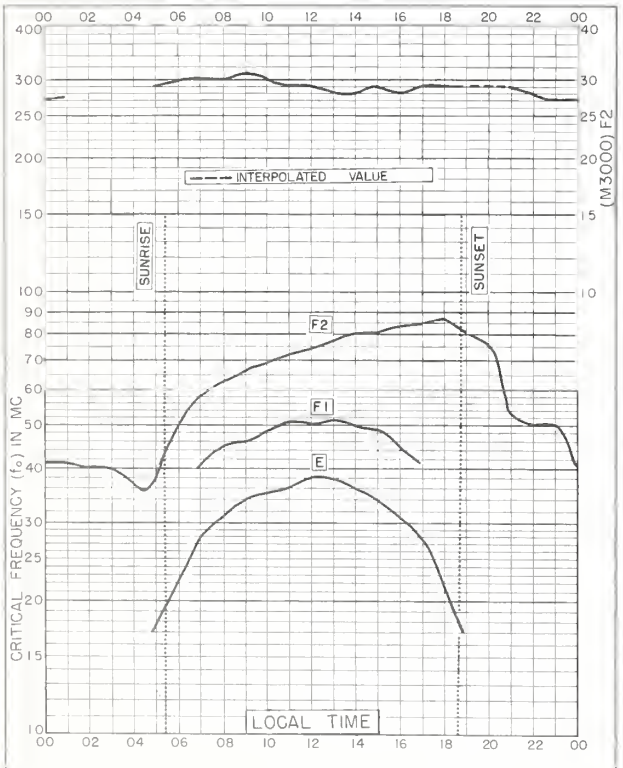


Fig. 39. OTTAWA, CANADA
45.4°N, 75.9°W APRIL 1960

NBS 503

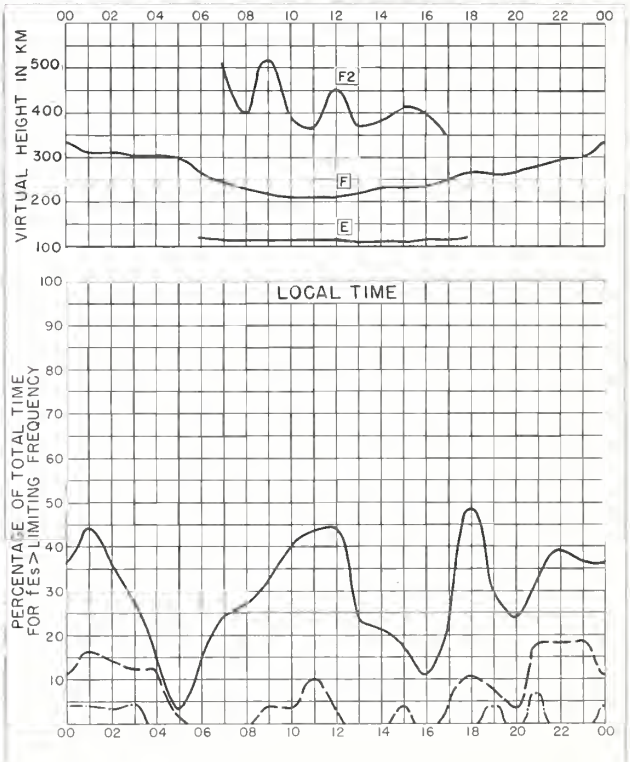


Fig. 40. OTTAWA, CANADA APRIL 1960

NBS 490

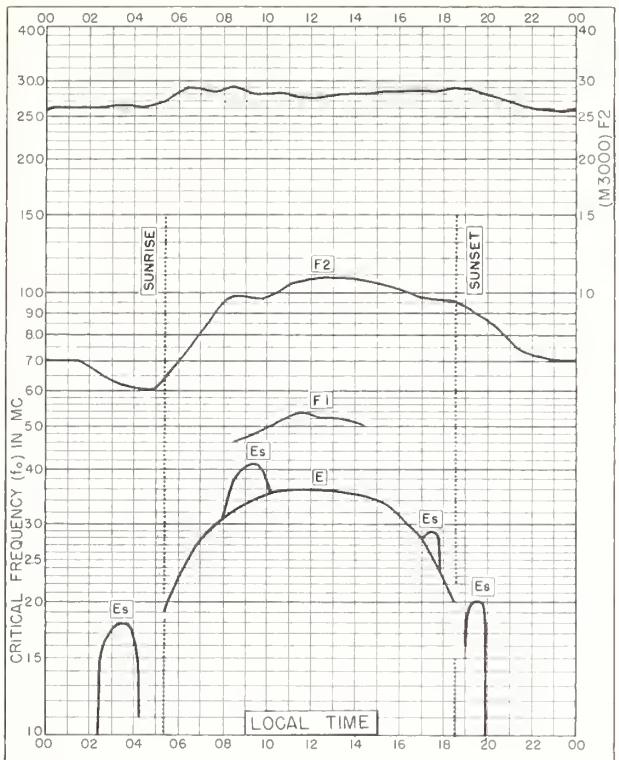


Fig. 41. WAKKANAI, JAPAN
45.4°N, 141.7°E APRIL 1960

NBS 503

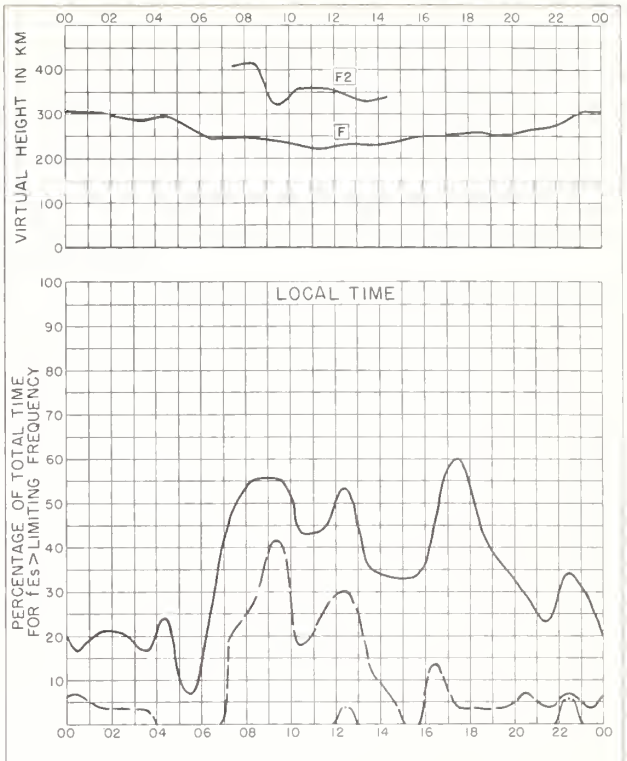


Fig. 42. WAKKANAI, JAPAN APRIL 1960

NBS 490

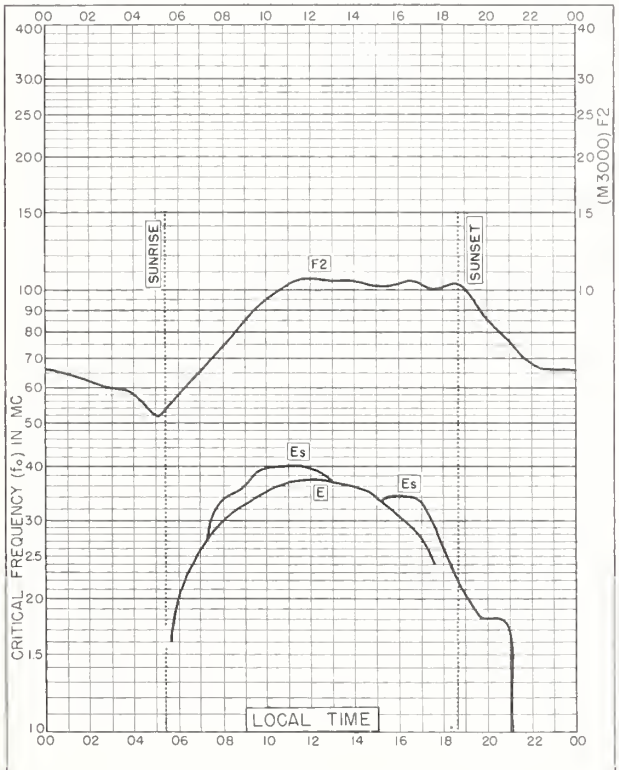


Fig. 43. GENOA (MONTE CAPELLINO), ITALY
44.6°N, 9.0°E APRIL 1960

NBS 503

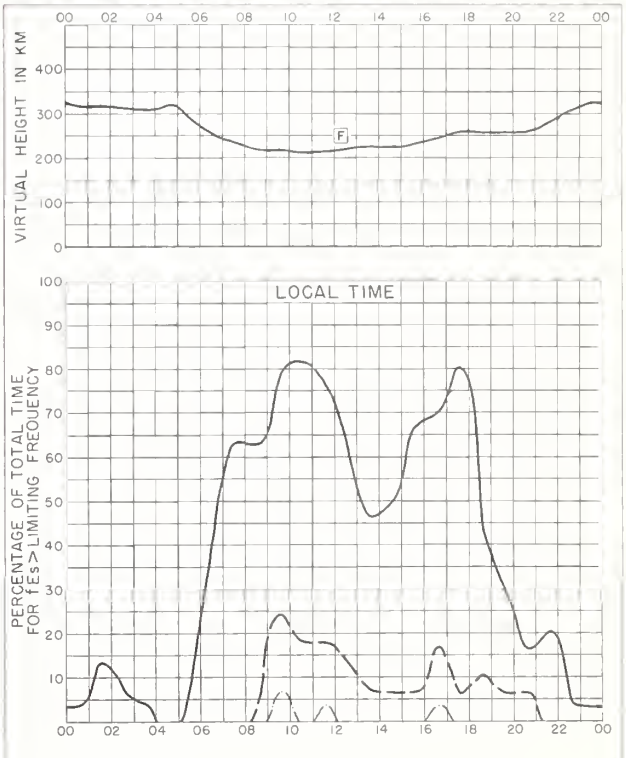


Fig. 44. GENOA (MONTE CAPELLINO), ITALY APRIL 1960

NBS 490

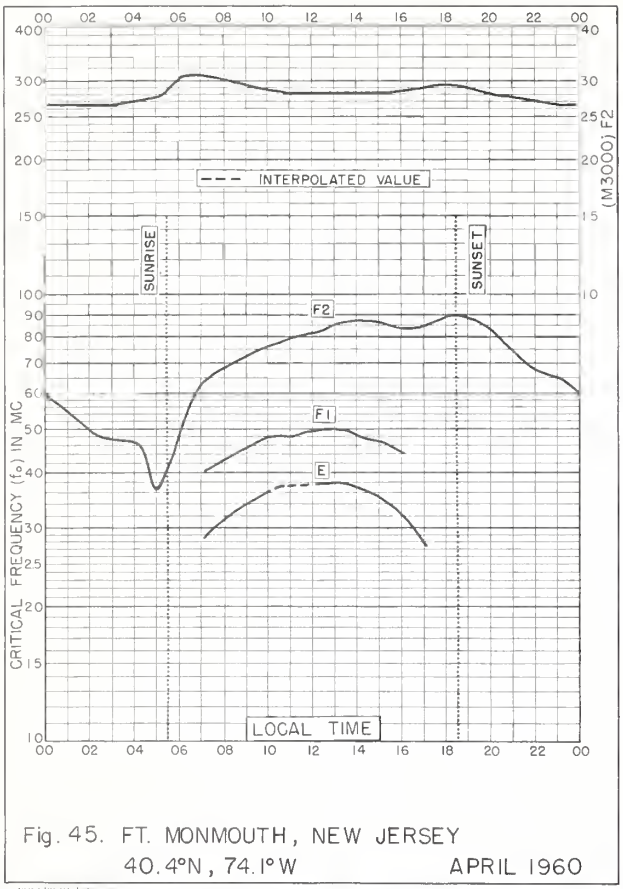


Fig. 45. FT. MONMOUTH, NEW JERSEY
40.4°N, 74.1°W APRIL 1960

NBS 503

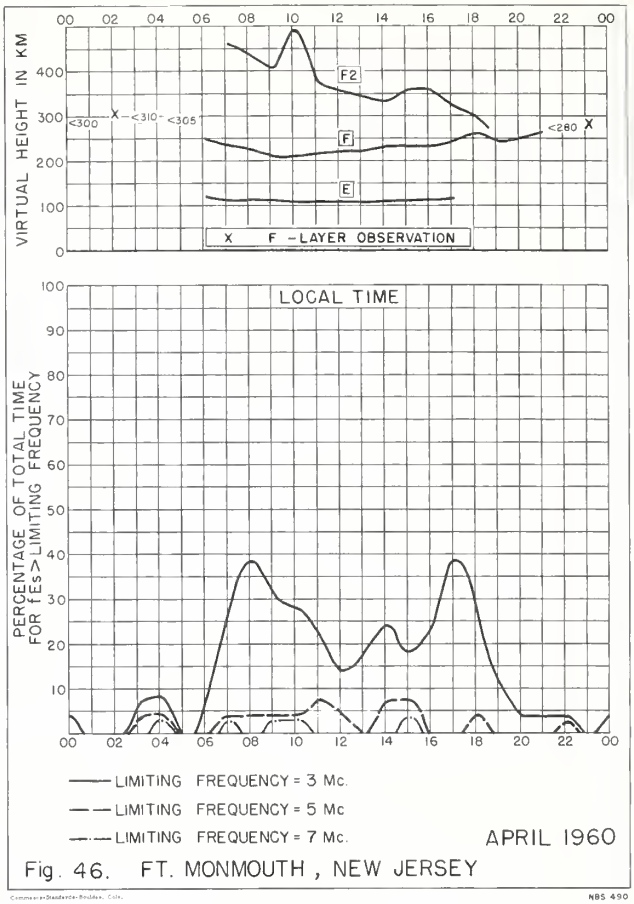


Fig. 46. FT. MONMOUTH, NEW JERSEY APRIL 1960

NBS 490

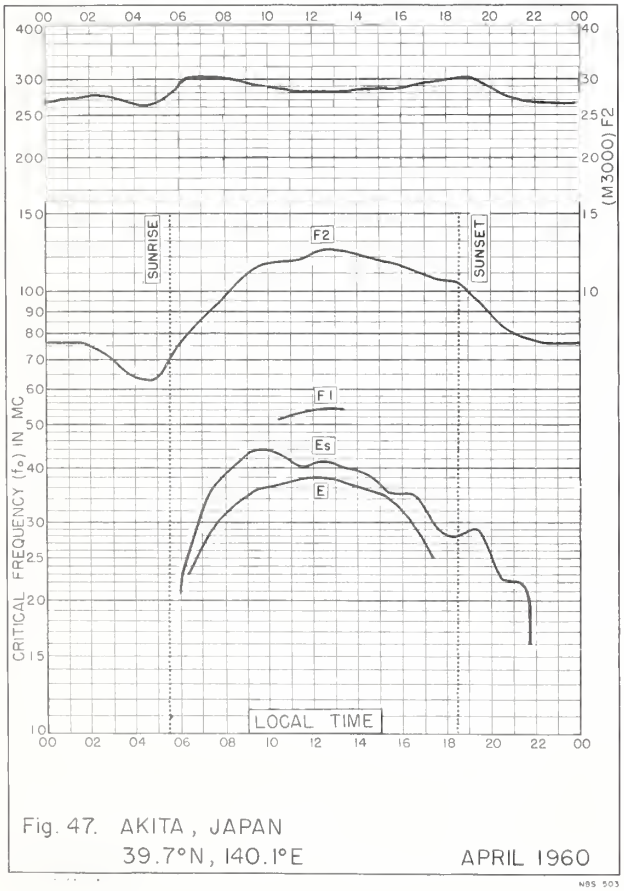


Fig. 47. AKITA, JAPAN
39.7°N, 140.1°E APRIL 1960

NBS 503

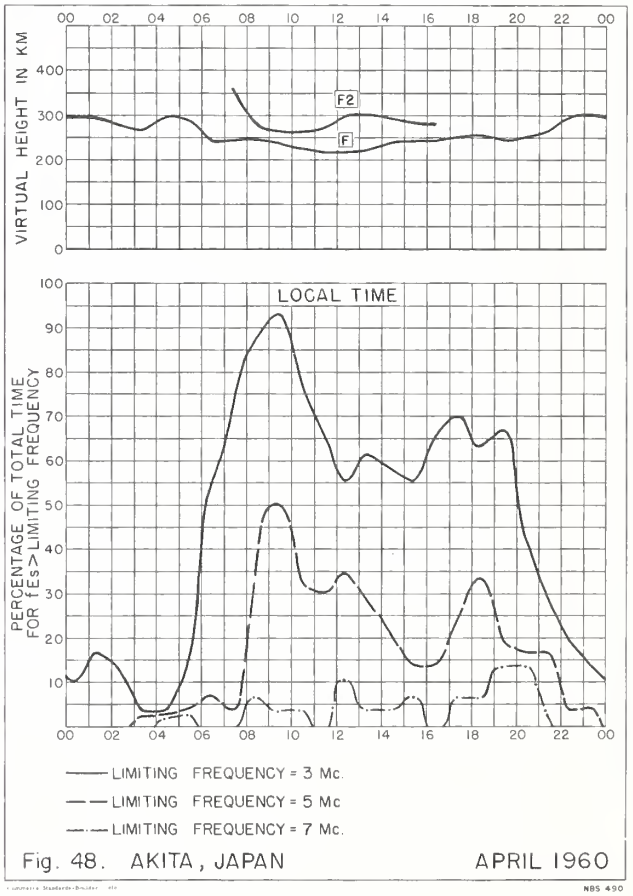


Fig. 48. AKITA, JAPAN APRIL 1960

NBS 490

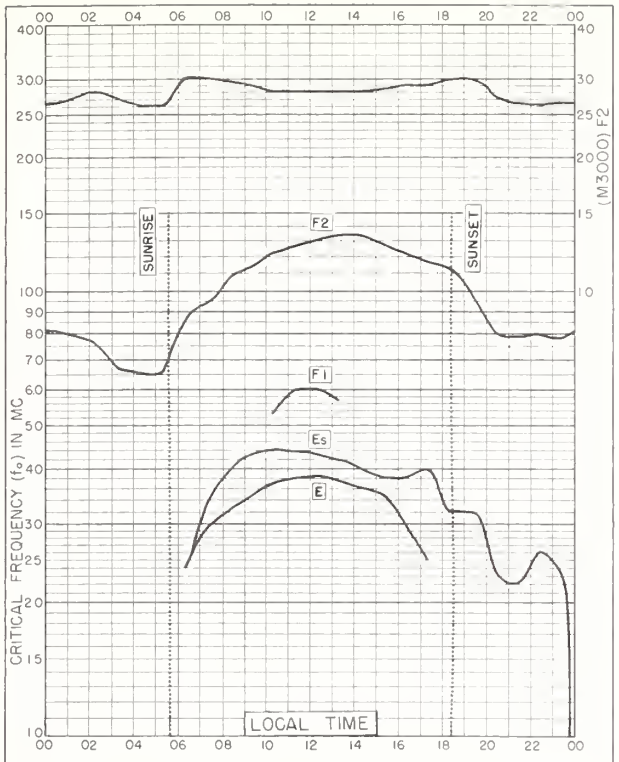


Fig. 49. TOKYO, JAPAN
35.7°N, 139.5°E APRIL 1960

NBS 503

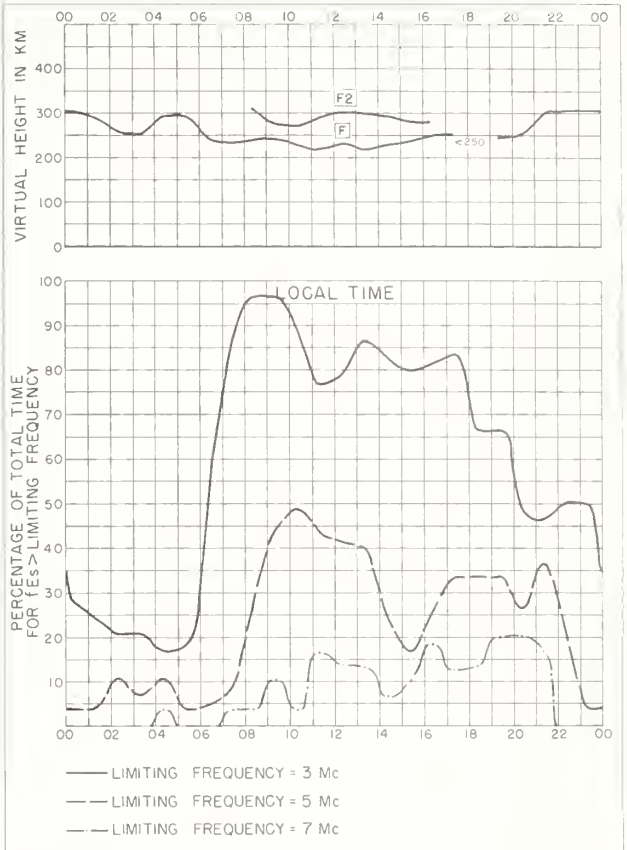


Fig. 50. TOKYO, JAPAN APRIL 1960

NBS 490

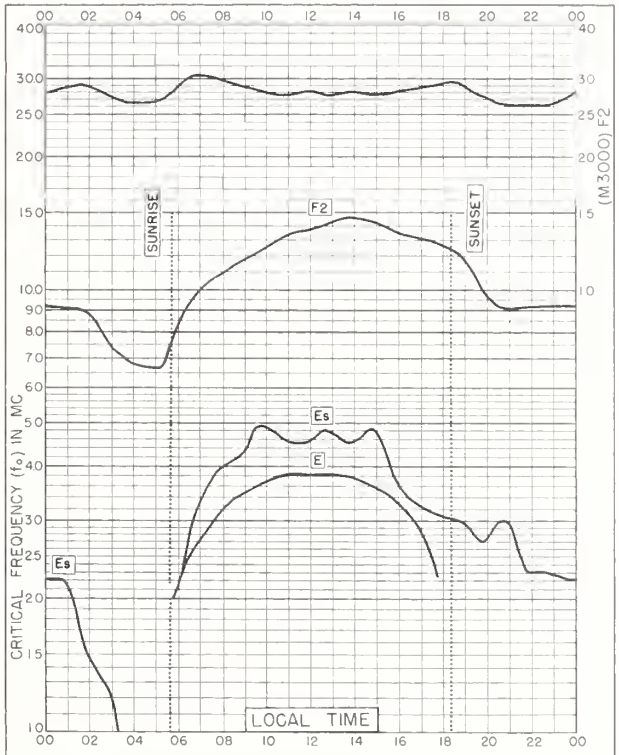


Fig. 51. YAMAGAWA, JAPAN
31.2°N, 130.6°E APRIL 1960

NBS 503

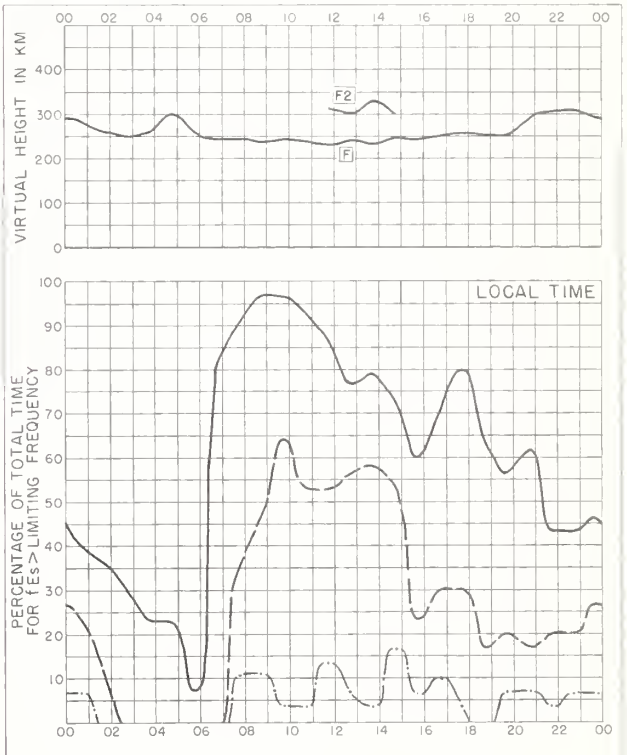


Fig. 52. YAMAGAWA, JAPAN APRIL 1960

NBS 490

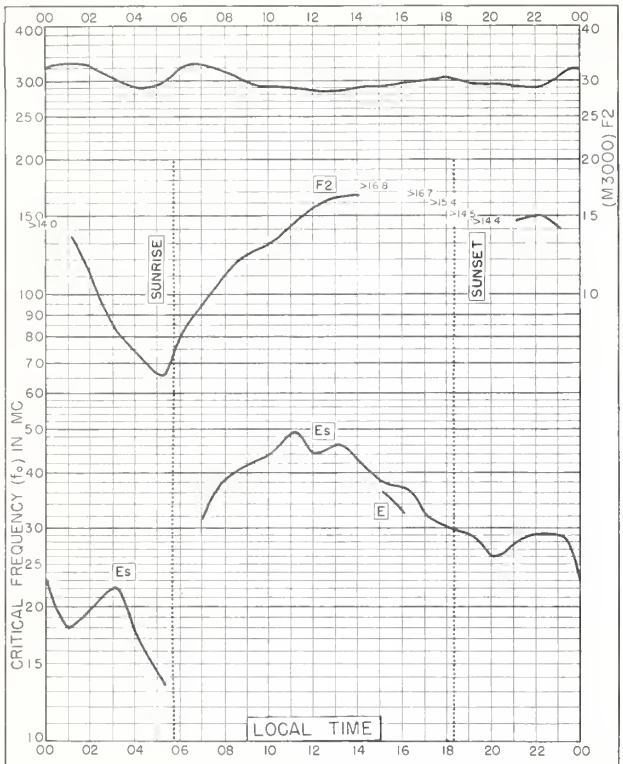


Fig. 53. FORMOSA, CHINA
25.0°N, 121.5°E APRIL 1960

NBS 503

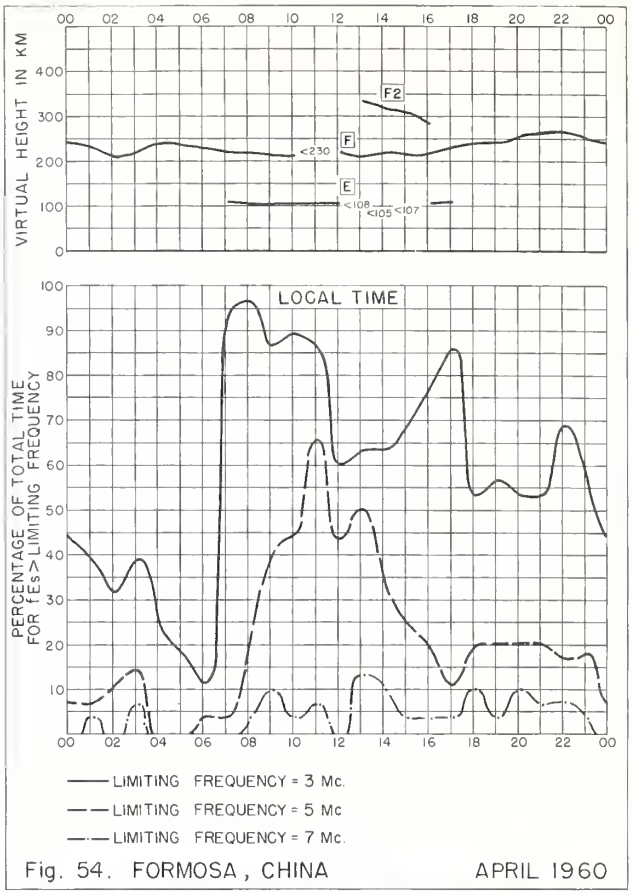


Fig. 54. FORMOSA, CHINA APRIL 1960

NBS 490

Fig. 55. MAUI, HAWAII
20.8°N, 156.5°W APRIL 1960

NBS 503

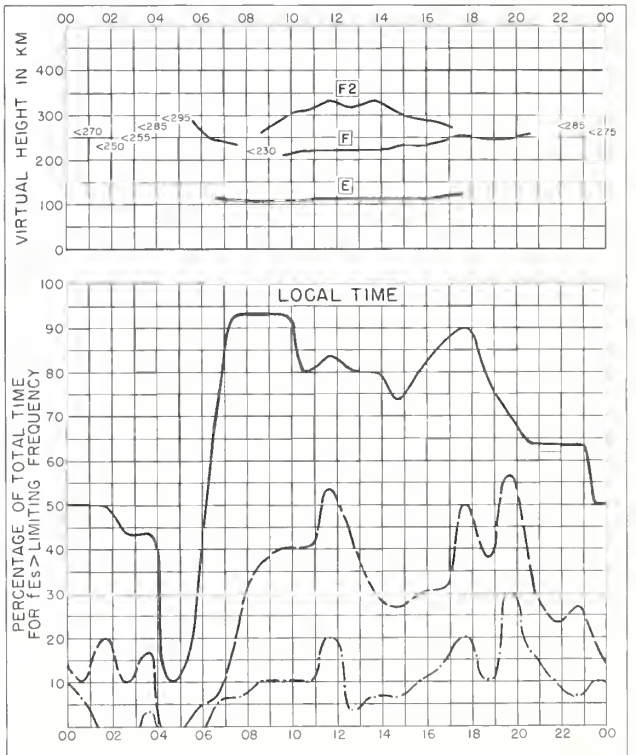


Fig. 56. MAUI, HAWAII APRIL 1960

NBS 490

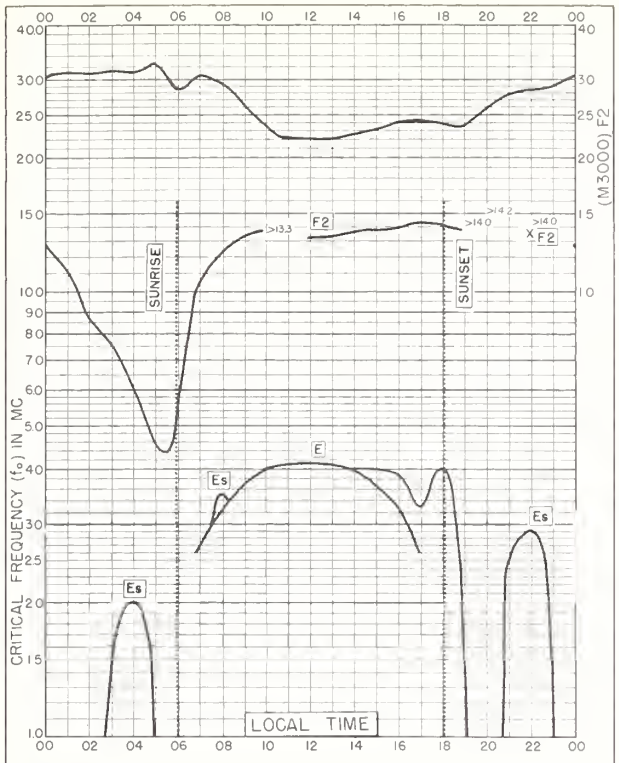


Fig. 57. SINGAPORE, BRITISH MALAYA
1.3°N, 103.8°E APRIL 1960

NBS 503

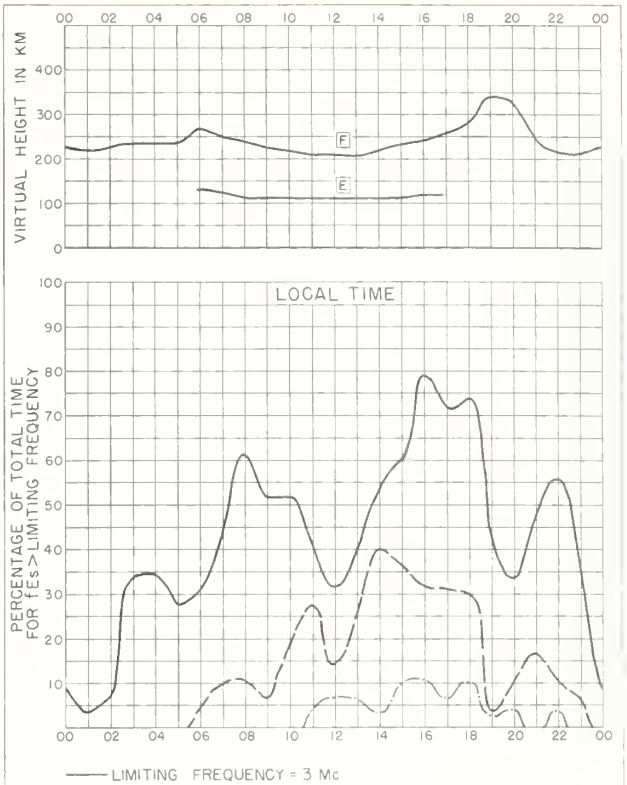


Fig. 58. SINGAPORE, BRITISH MALAYA APRIL 1960

NBS 490

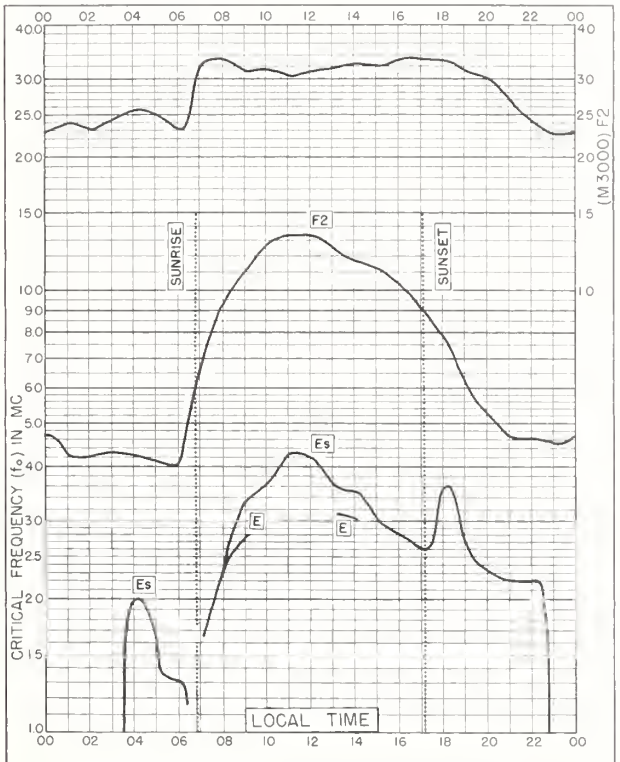


Fig. 59. FALKLAND IS.
51.7°S, 57.8°W APRIL 1960

NBS 503

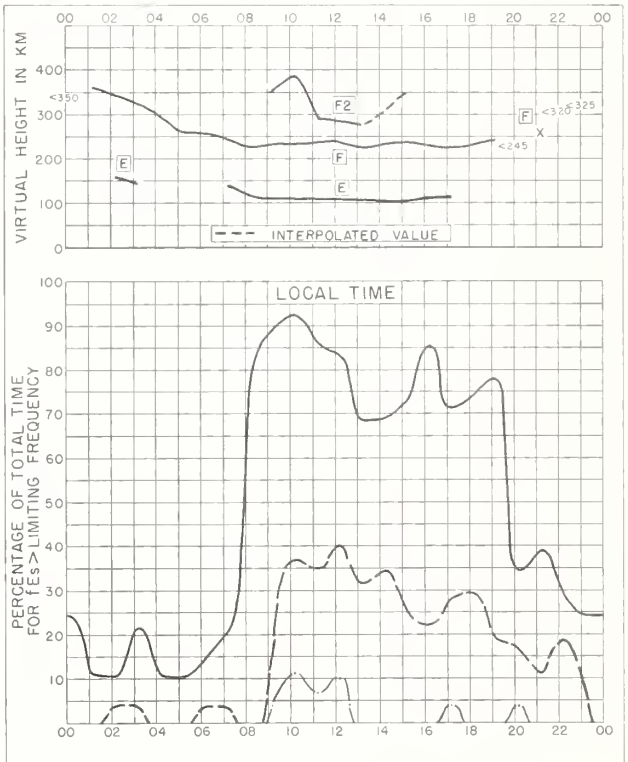


Fig. 60. FALKLAND IS. APRIL 1960

NBS 490

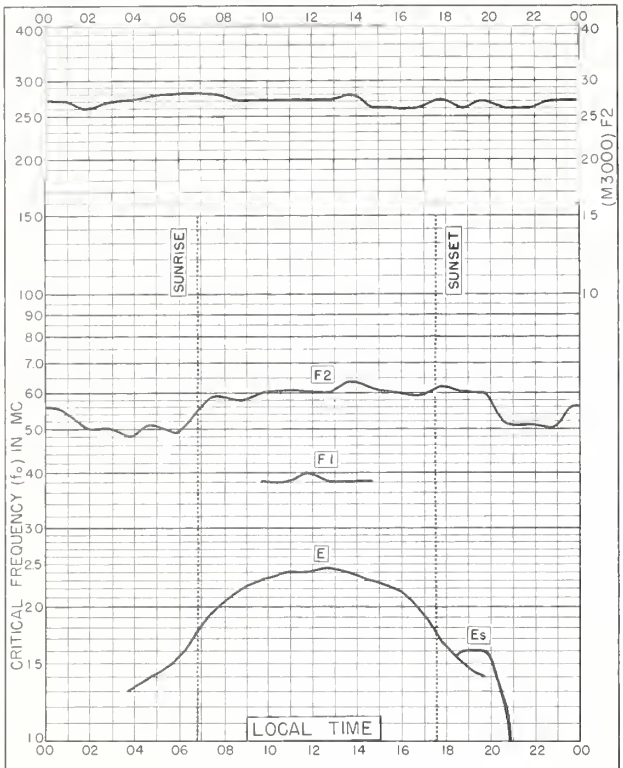


Fig. 61. RESOLUTE BAY, CANADA
74.7°N, 94.9°W MARCH 1960

NBS 503

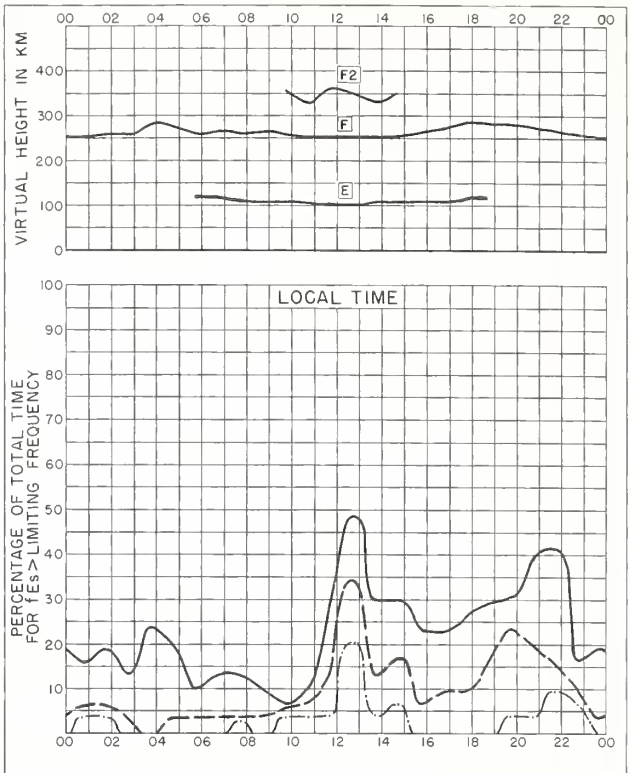


Fig. 62. RESOLUTE BAY, CANADA MARCH 1960

NBS 490

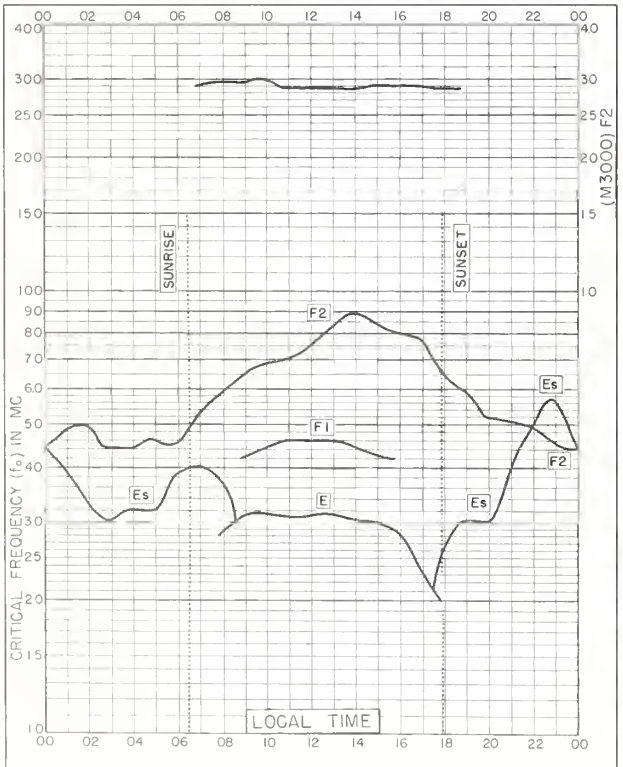


Fig. 63. CHURCHILL, CANADA
58.8°N, 94.2°W MARCH 1960

NBS 503

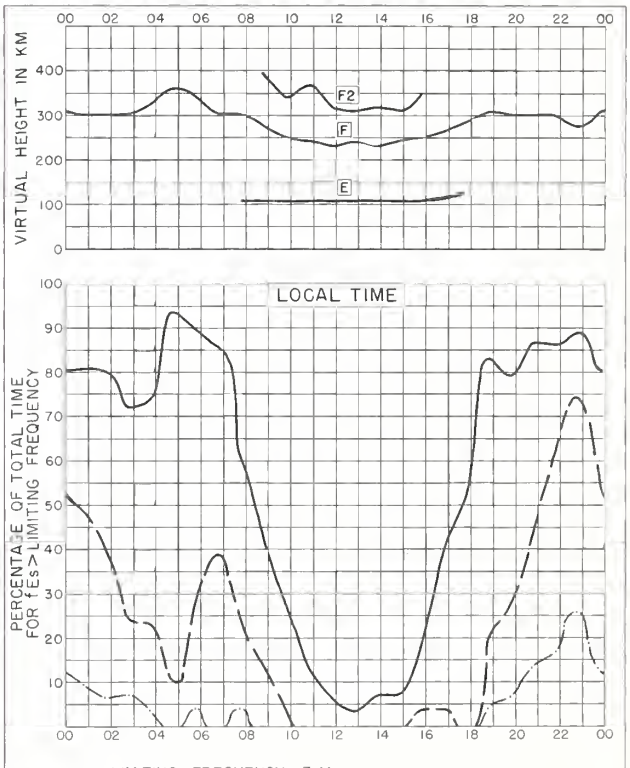


Fig. 64. CHURCHILL, CANADA MARCH 1960

NBS 490

Fig. 65. WINNIPEG, CANADA
49.9°N, 97.4°W MARCH 1960

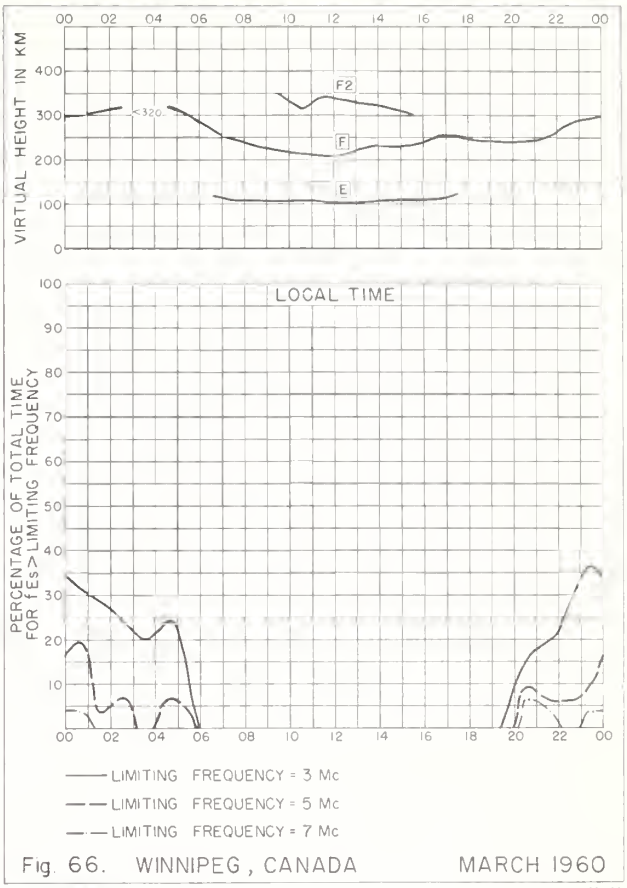


Fig. 66. WINNIPEG, CANADA MARCH 1960

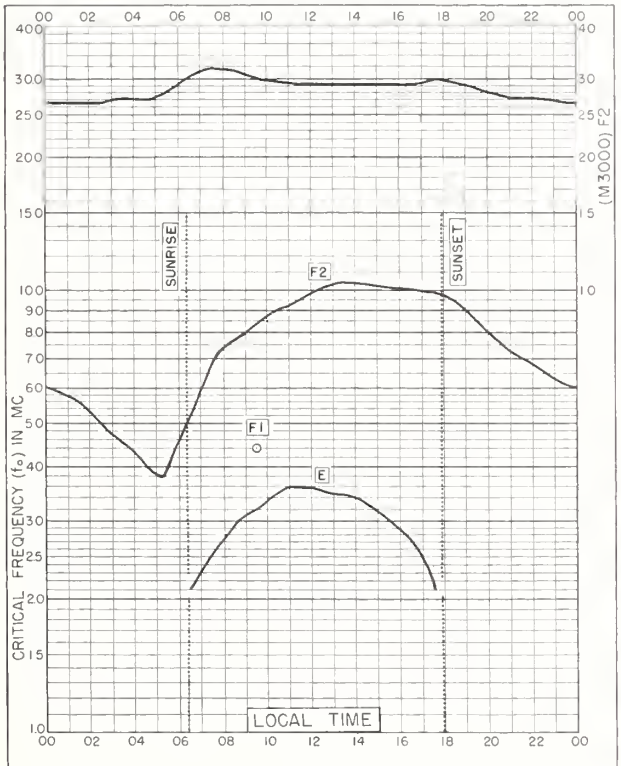


Fig. 67. ST. JOHN'S, NEWFOUNDLAND
47.6°N, 52.7°W MARCH 1960

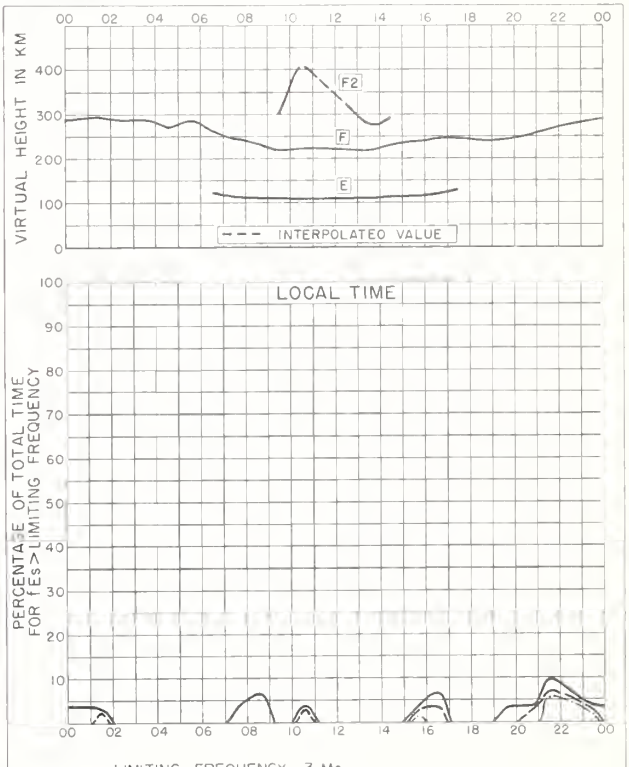


Fig. 68. ST. JOHN'S, NEWFOUNDLAND MARCH 1960

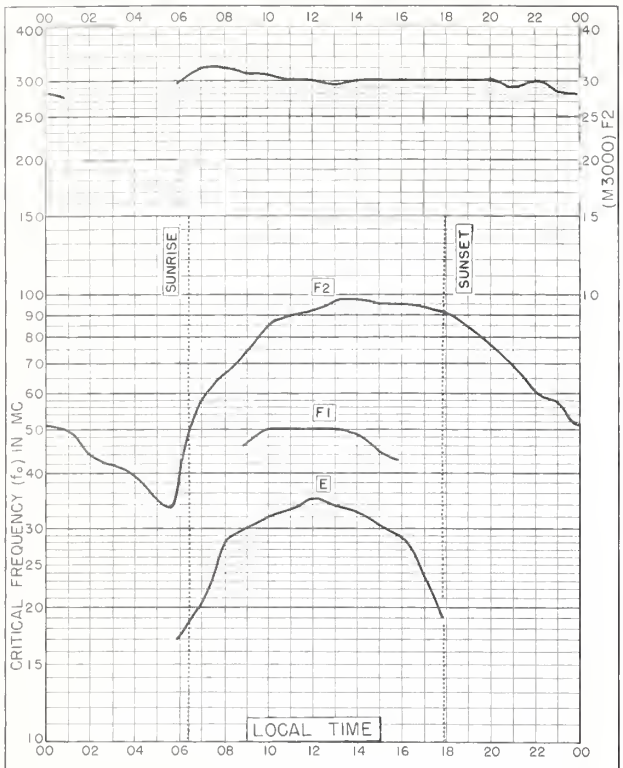


Fig. 69. OTTAWA, CANADA
45.4°N, 75.9°W MARCH 1960

NBS 503

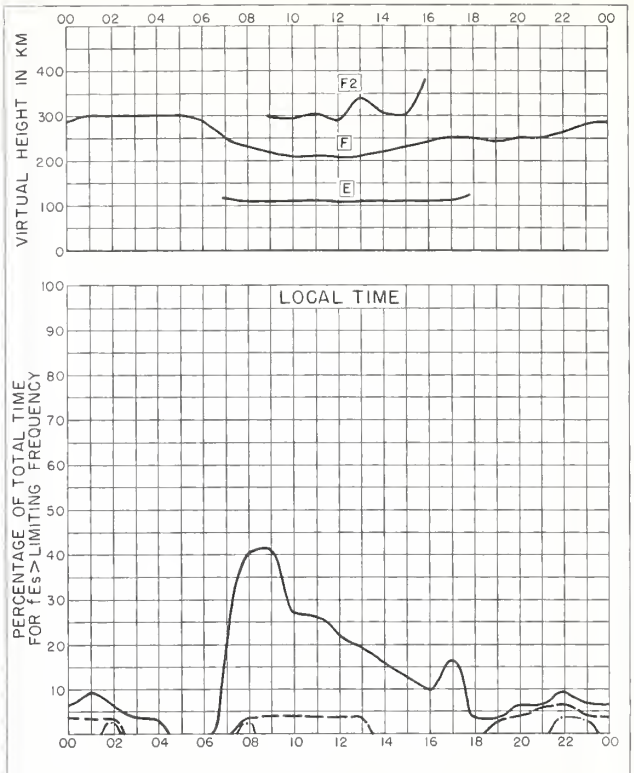


Fig. 70. OTTAWA, CANADA MARCH 1960

NBS 490

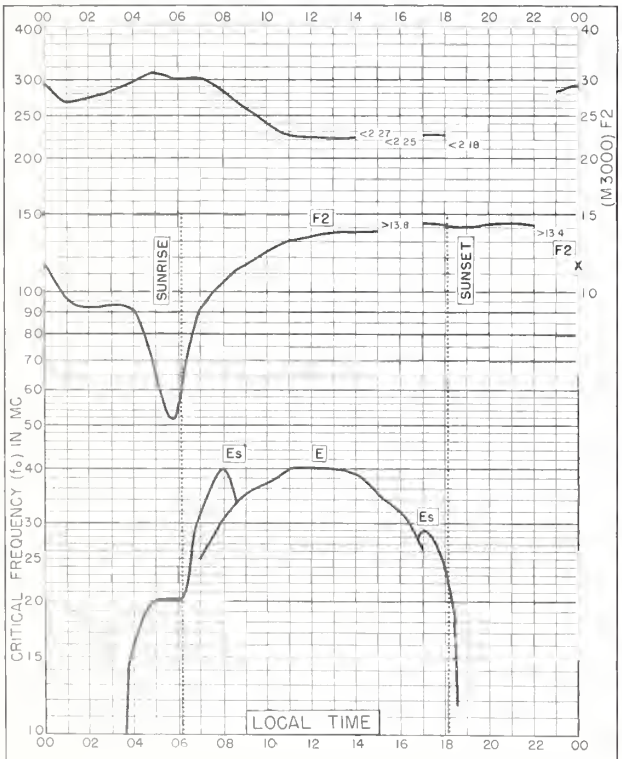


Fig. 71. BUNIA, BELGIAN CONGO
1.5°N, 30.2°E MARCH 1960

NBS 503

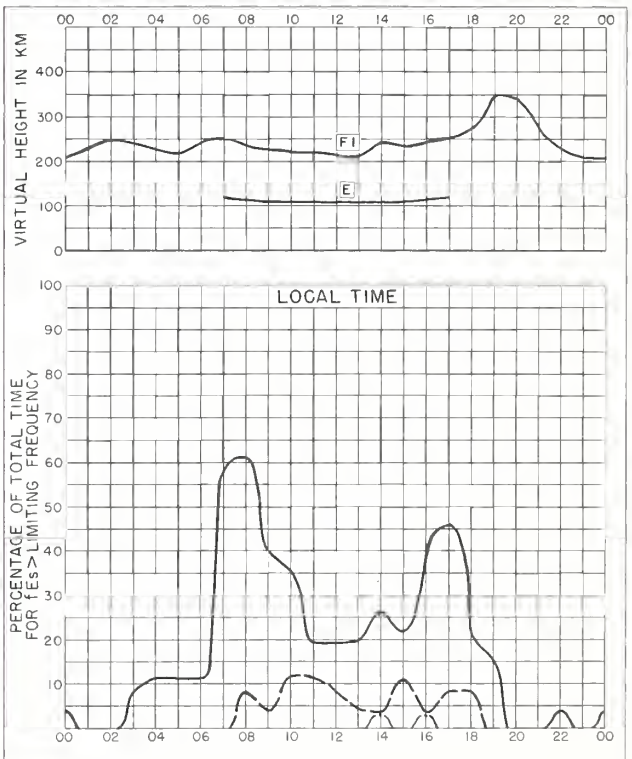


Fig. 72. BUNIA, BELGIAN CONGO MARCH 1960

NBS 490

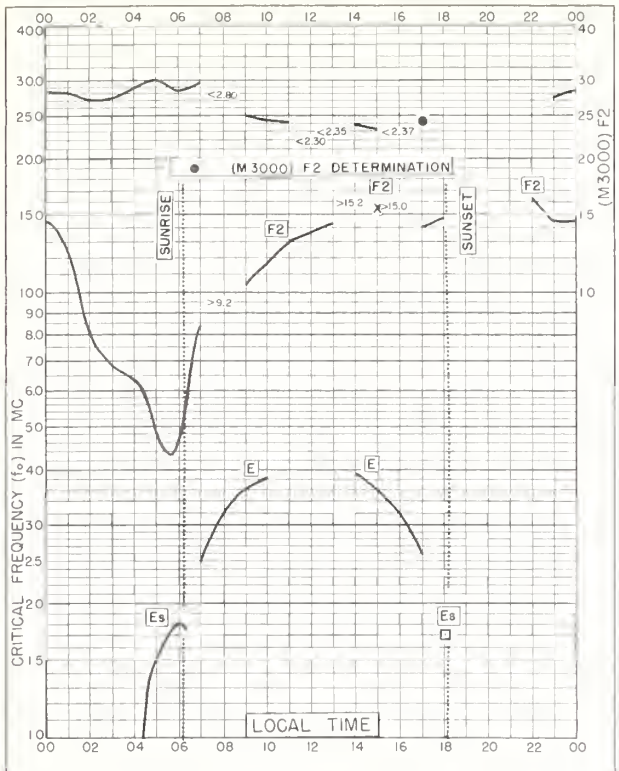
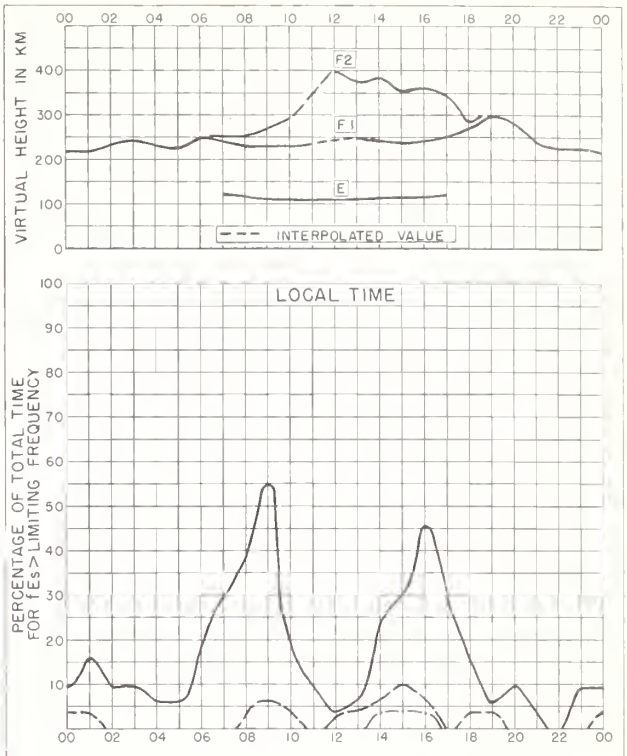


Fig. 73. LEOPOLDVILLE, BELGIAN CONGO
4.4°S, 15.2°E MARCH 1960



MARCH 1960

Fig. 74. LEOPOLDVILLE, BELGIAN CONGO

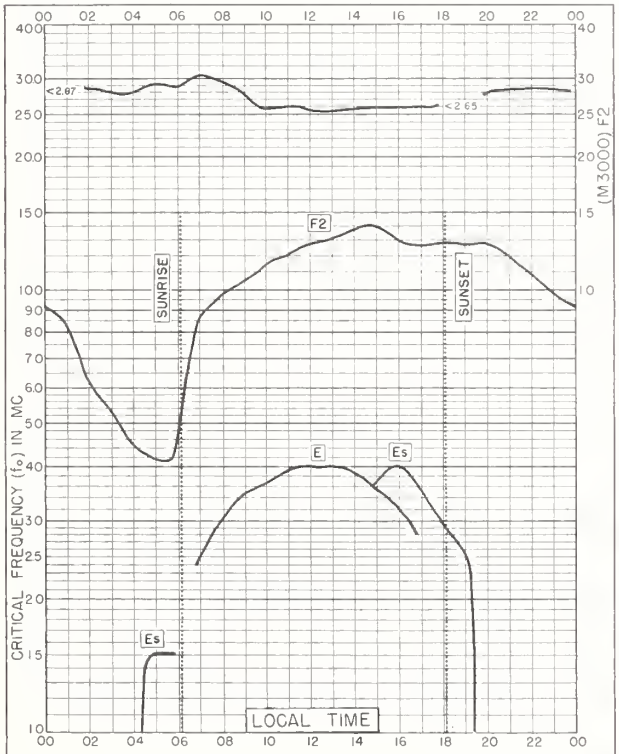
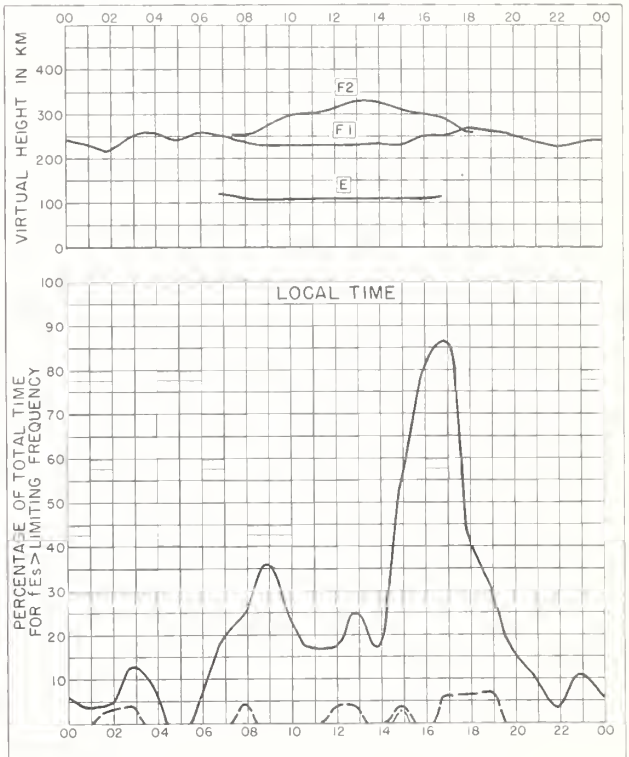


Fig. 75. ELISABETHVILLE, BELGIAN CONGO
11.6°S, 27.5°E MARCH 1960



MARCH 1960

Fig. 76. ELISABETHVILLE, BELGIAN CONGO

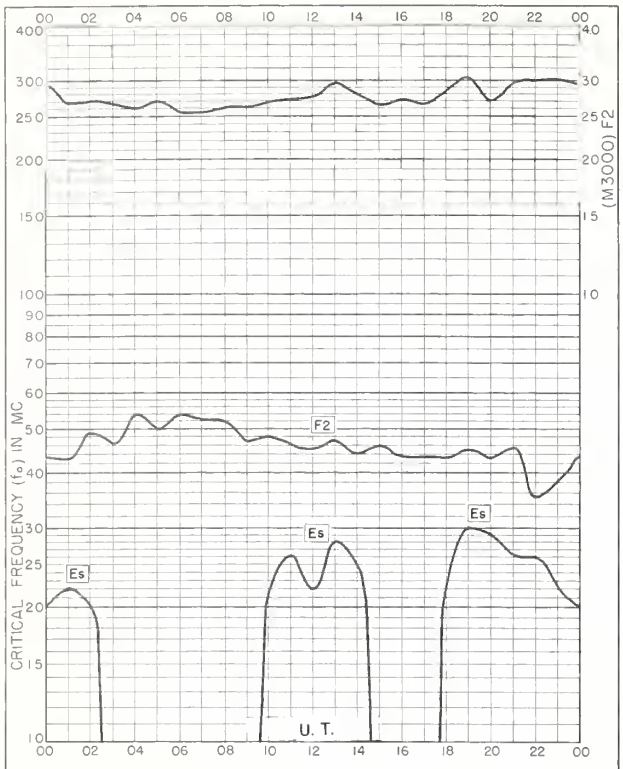


Fig. 77. POLE STATION
90.0°S JUNE 1959

NBS 503

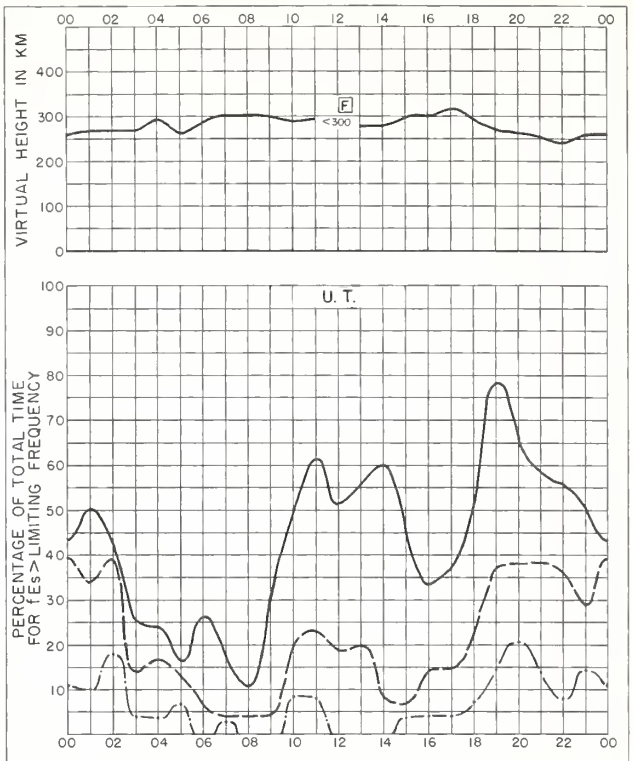


Fig. 78. POLE STATION JUNE 1959

NBS 490

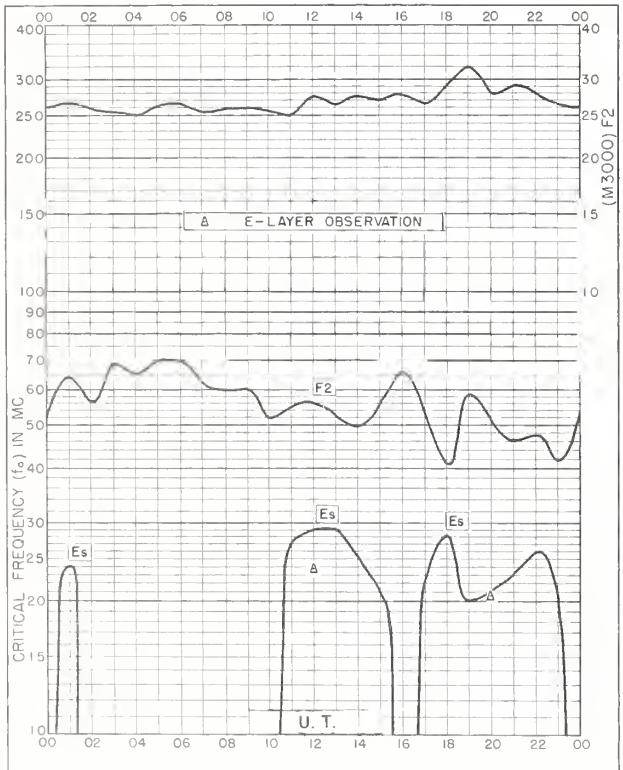


Fig. 79. POLE STATION
90.0°S MAY 1959

NBS 503

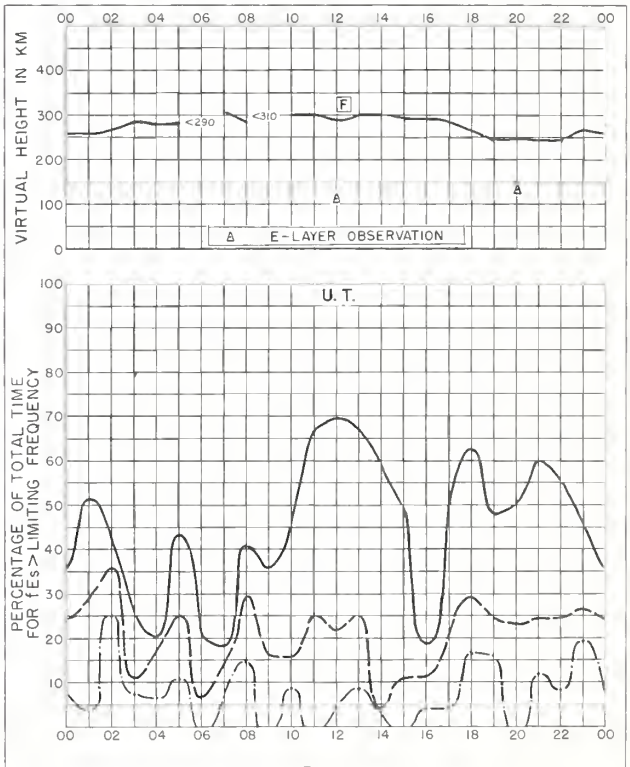


Fig. 80. POLE STATION MAY 1959

NBS 490

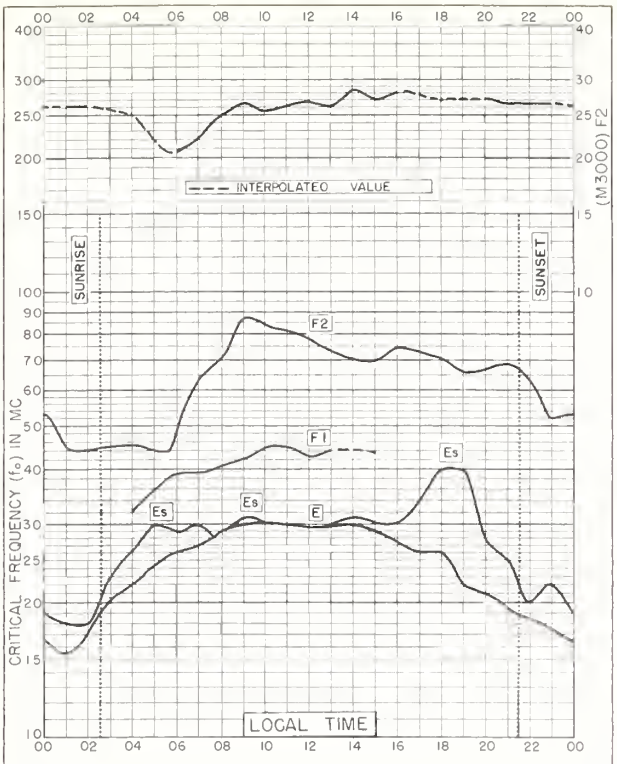


Fig. 81. SVALBARD, NORWAY
78.2°N, 15.7°E APRIL 1959

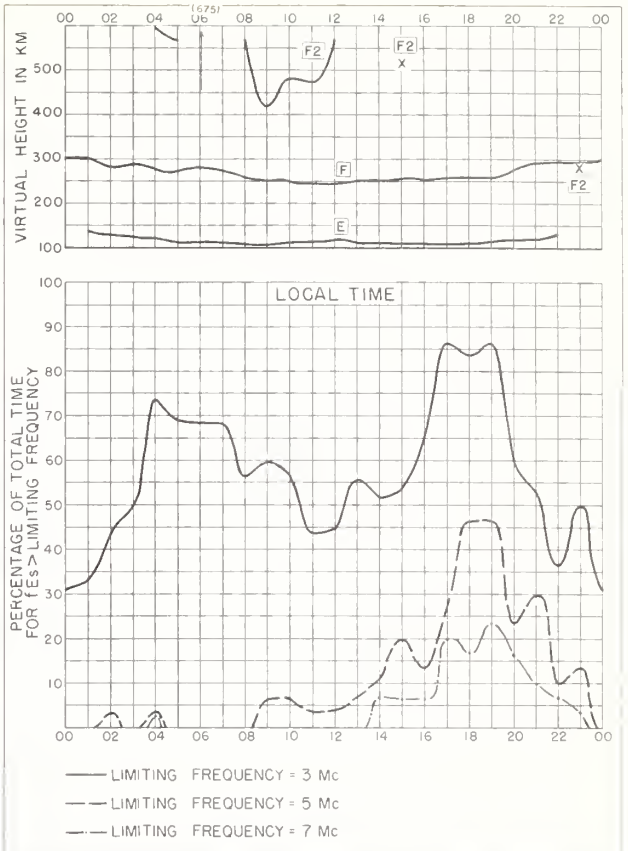


Fig. 82. SVALBARD, NORWAY APRIL 1959

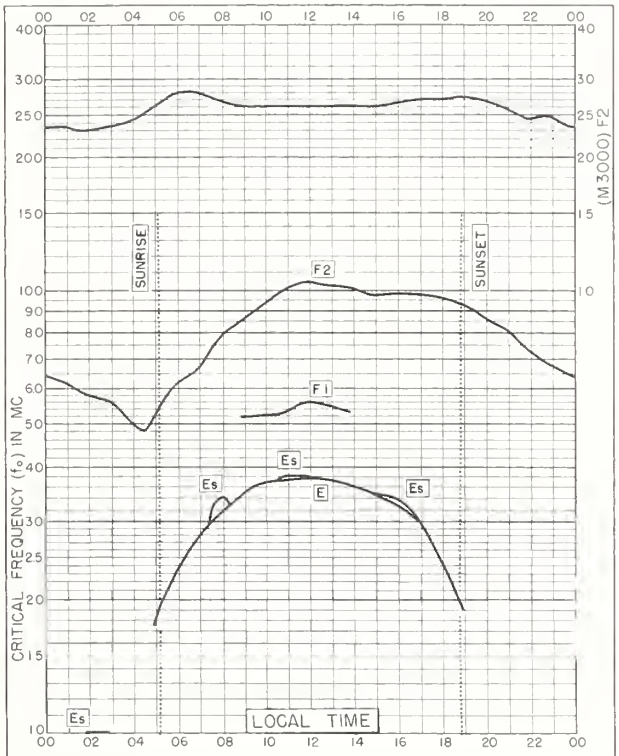


Fig. 83. JULIUSRUH/RÜGEN, GERMANY
54.6°N, 13.4°E APRIL 1959

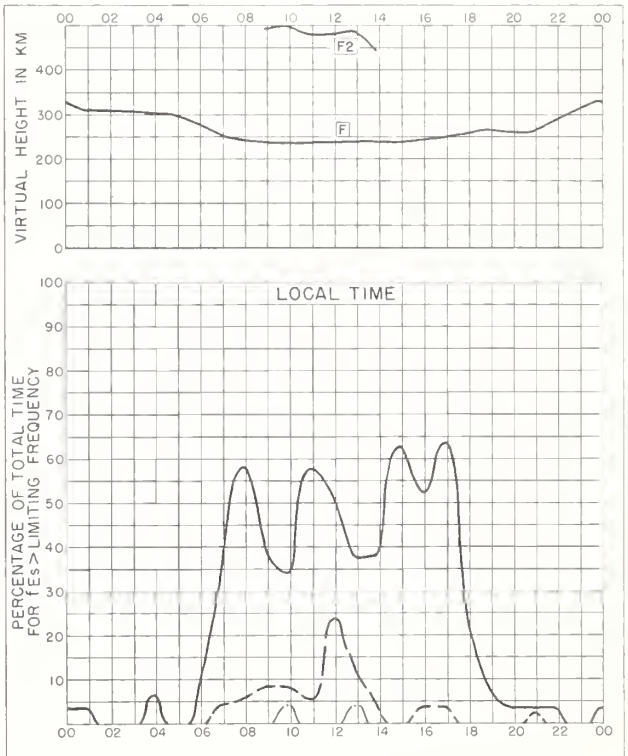


Fig. 84. JULIUSRUH/RÜGEN, GERMANY APRIL 1959

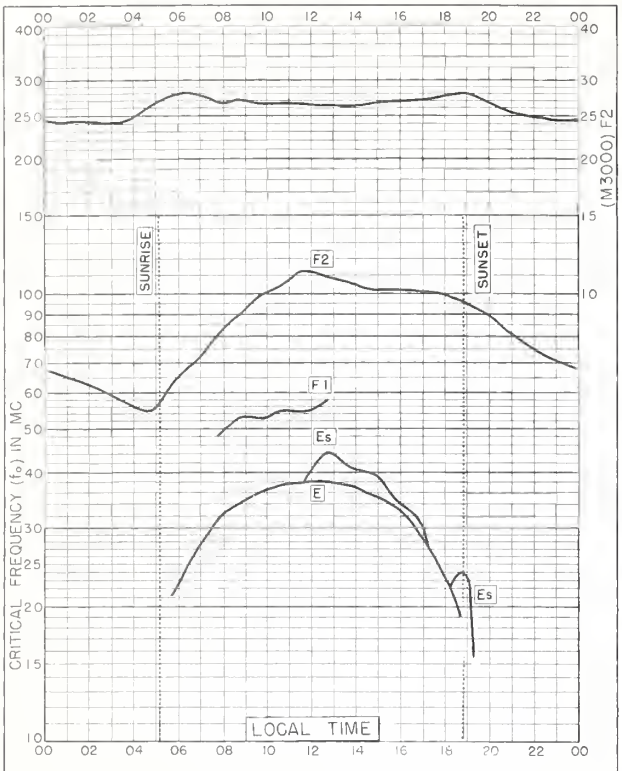


Fig. 85. LINDAU/HARZ, GERMANY
51.6°N, 10.1°E APRIL 1959

N85 503

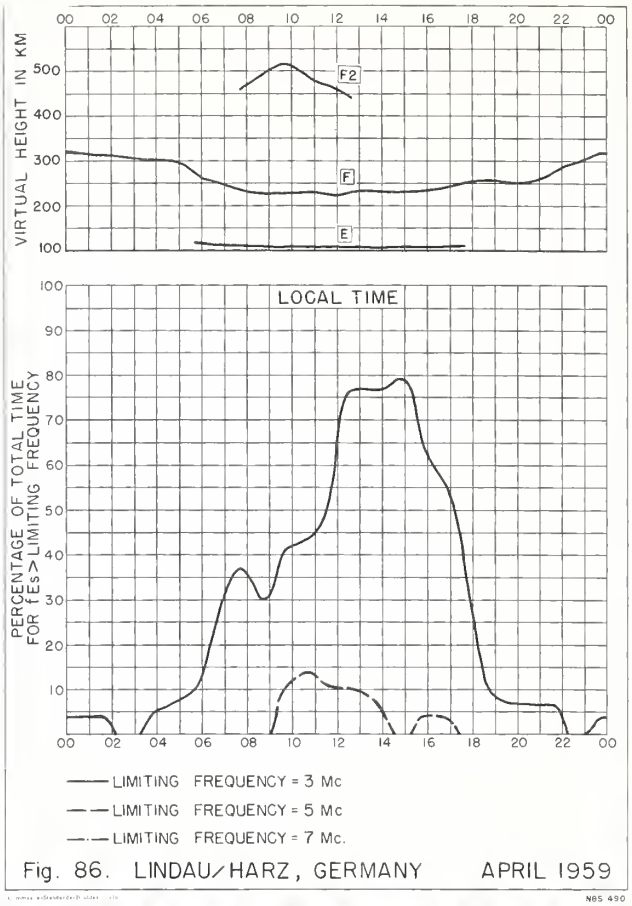


Fig. 86. LINDAU/HARZ, GERMANY APRIL 1959

N85 490

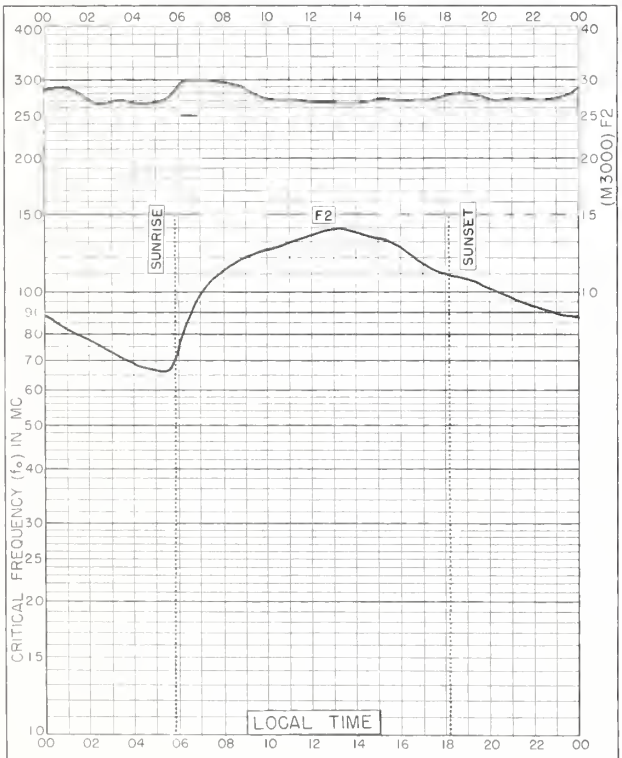


Fig. 87. EL CERILLO, MEXICO
19.3°N, 99.5°W APRIL 1959

N85 503

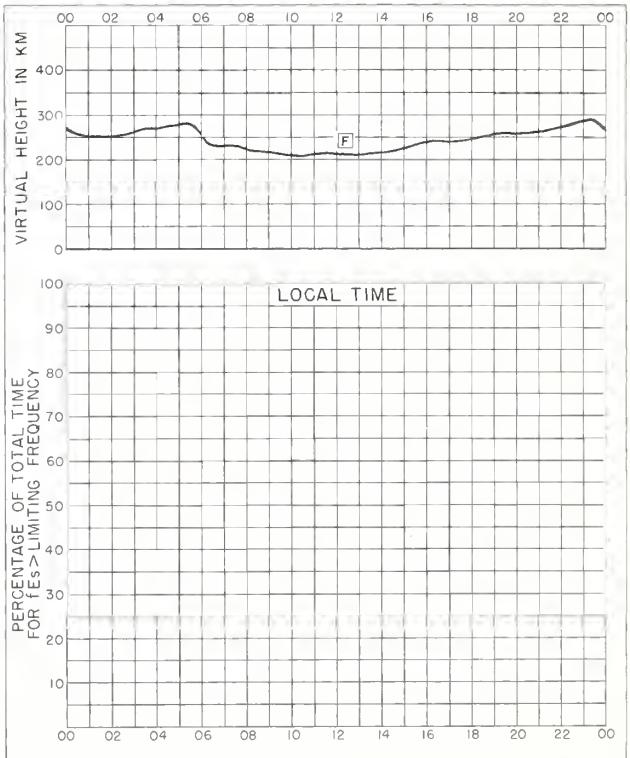


Fig. 88. EL CERILLO, MEXICO APRIL 1959

N85 490

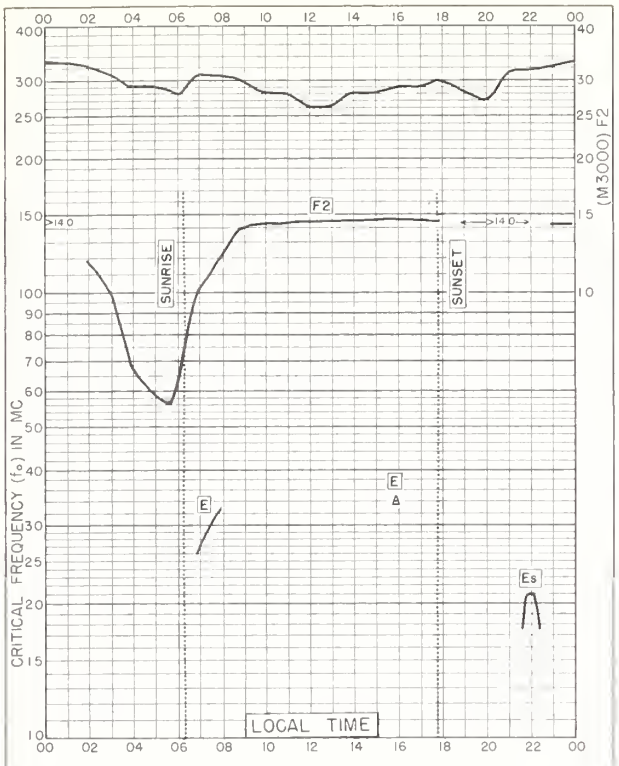


Fig. 89. SAO PAULO, BRAZIL
23.5°S, 46.5°W APRIL 1959

NBS 503

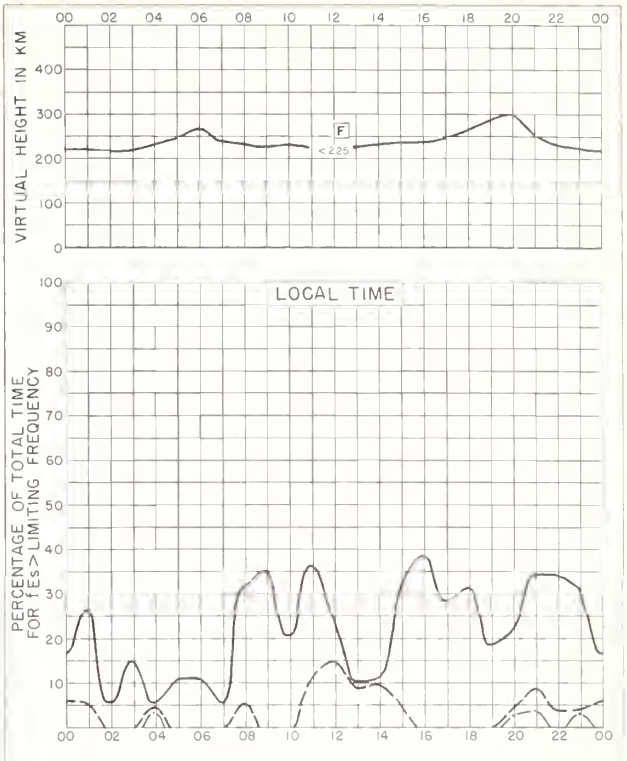


Fig. 90. SAO PAULO, BRAZIL APRIL 1959

NBS 490

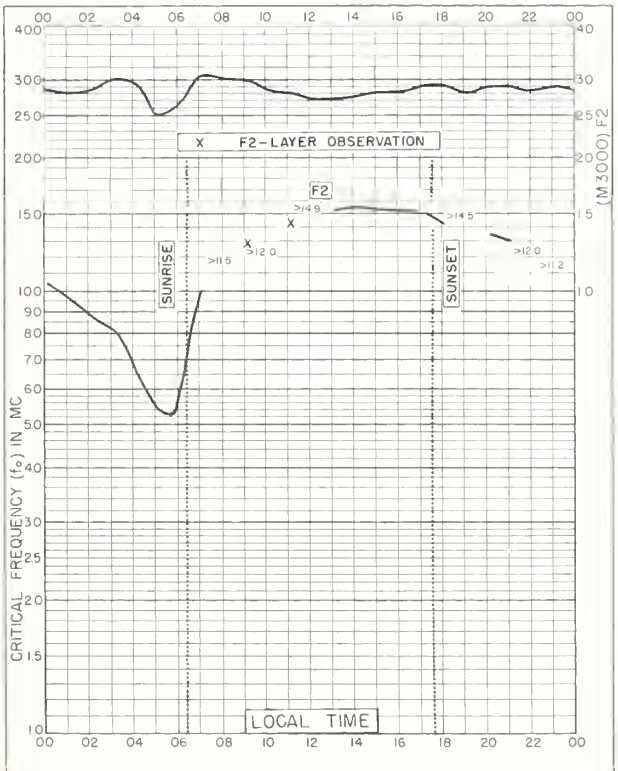


Fig. 91. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W APRIL 1959

NBS 503

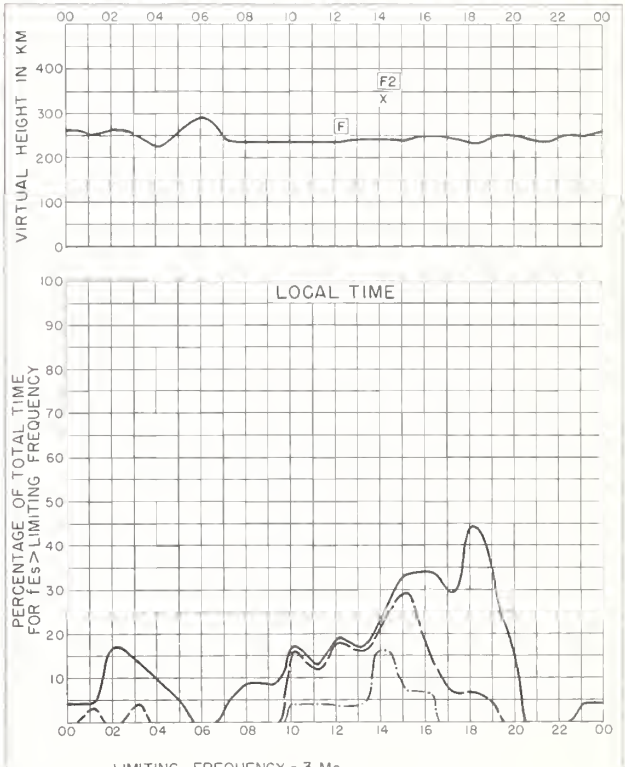


Fig. 92. BUENOS AIRES, ARGENTINA APRIL 1959

NBS 490

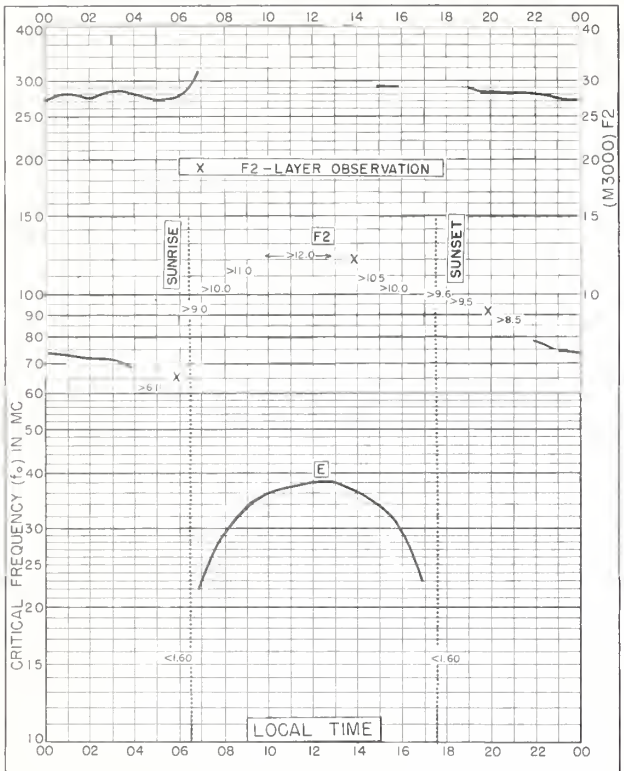


Fig. 93. CANBERRA, AUSTRALIA
35.3°S, 149.0°E APRIL 1959

NBS 503

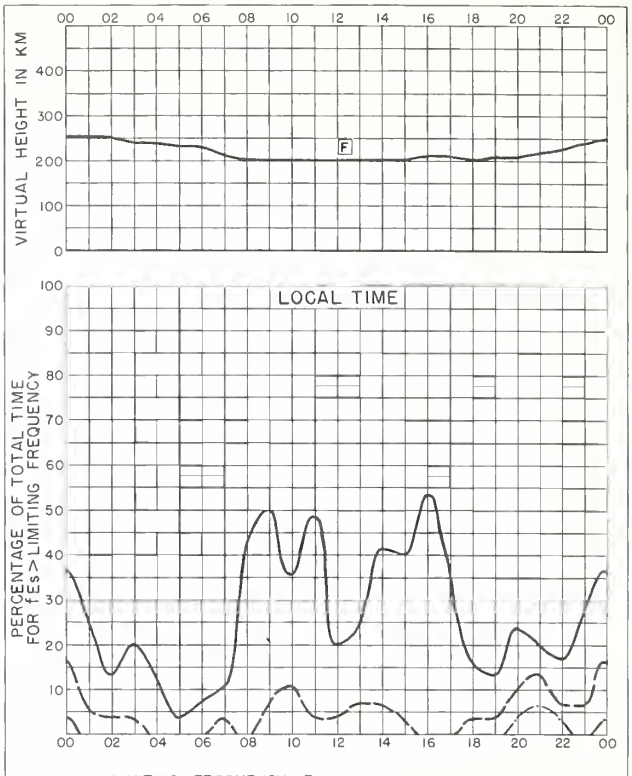


Fig. 94. CANBERRA, AUSTRALIA APRIL 1959

NBS 490

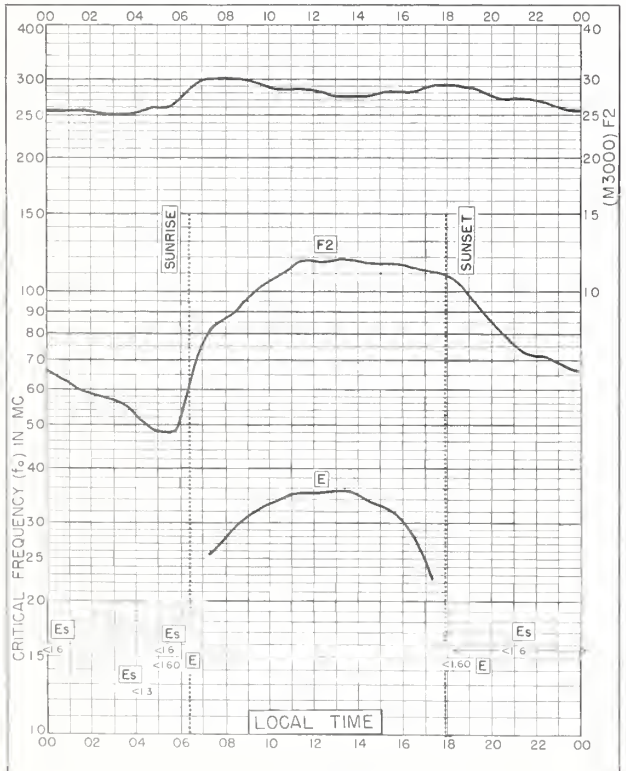


Fig. 95. DOURBES, BELGIUM
50.1°N, 4.6°E MARCH 1959

NBS 503

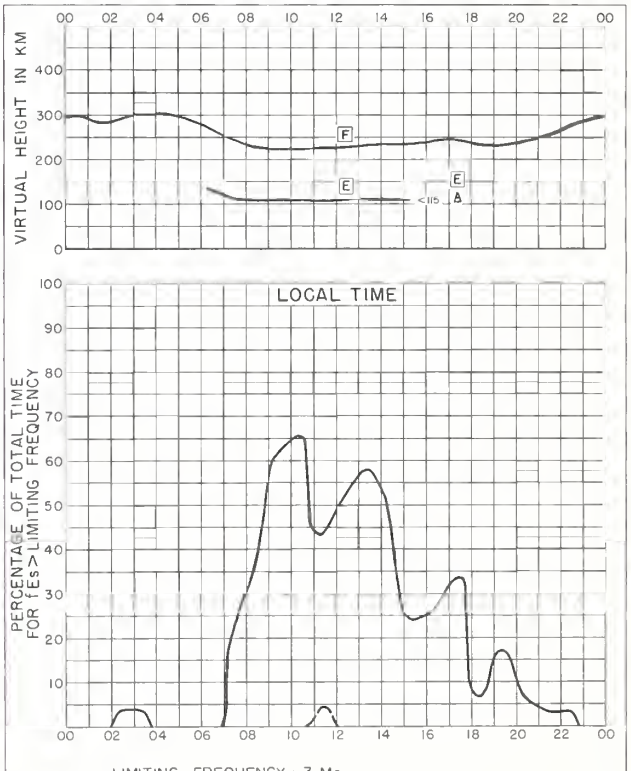


Fig. 96. DOURBES, BELGIUM MARCH 1959

NBS 490

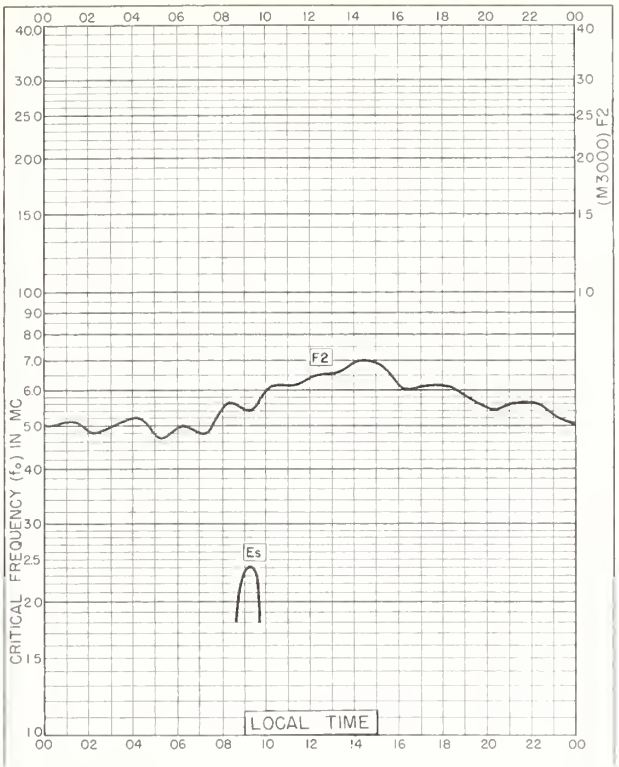


Fig. 97. EUREKA, CANADA
80.0°N, 85.9° W DECEMBER 1958

NBS 503

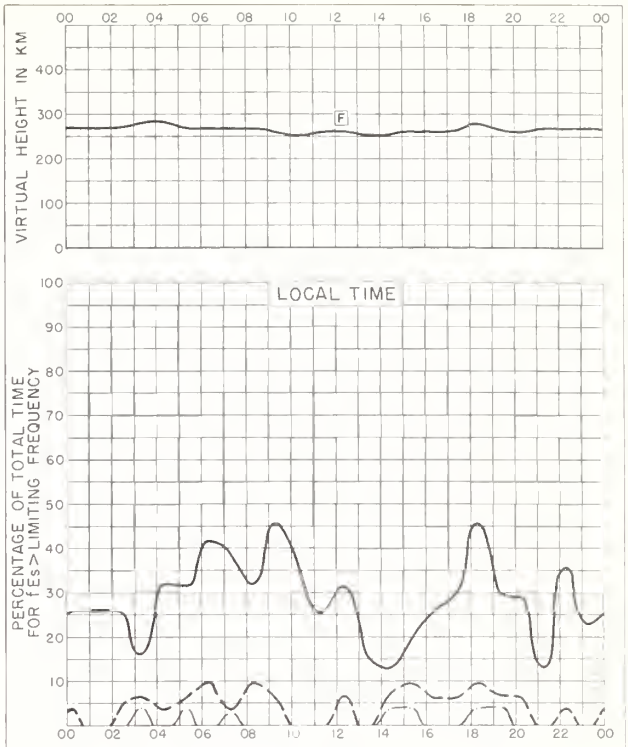


Fig. 98. EUREKA, CANADA DECEMBER 1958

NBS 490

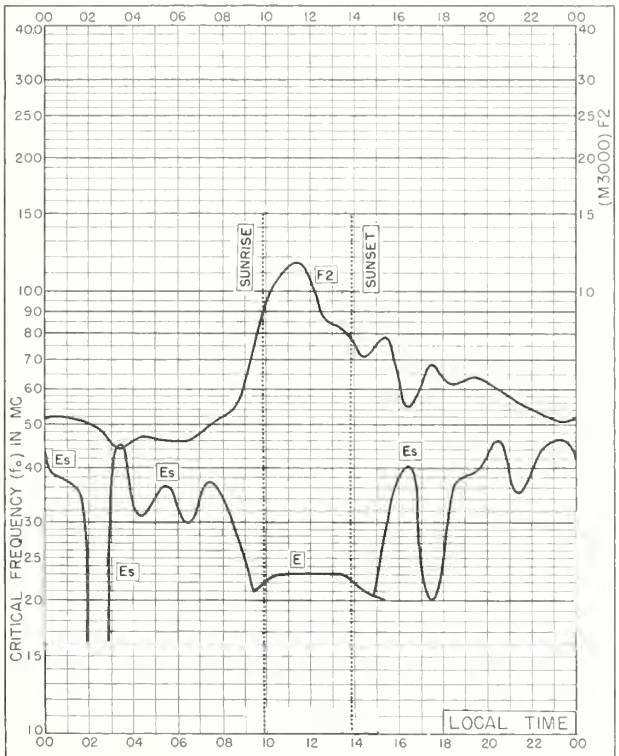
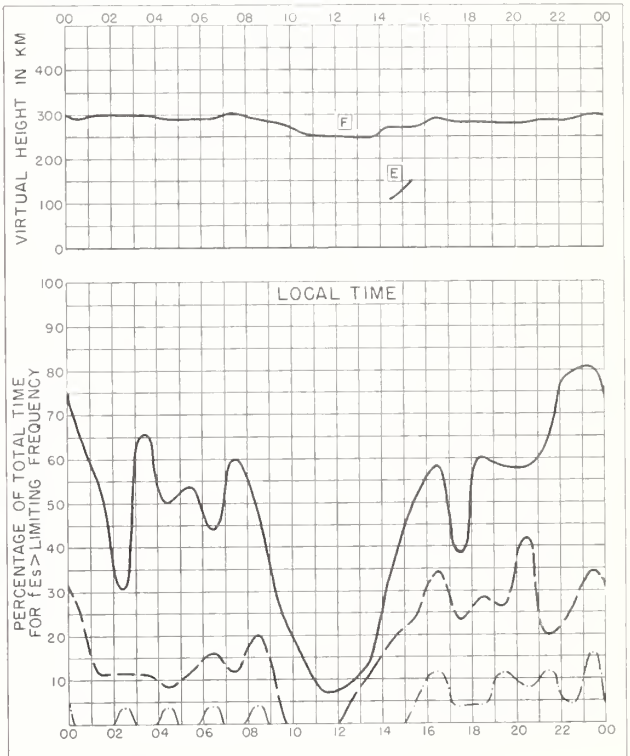


Fig. 99. FROBISHER, CANADA
63.8°N, 68.6° W DECEMBER 1958

NBS 503



DECEMBER 1958

Fig. 100. FROBISHER, CANADA

NBS 490

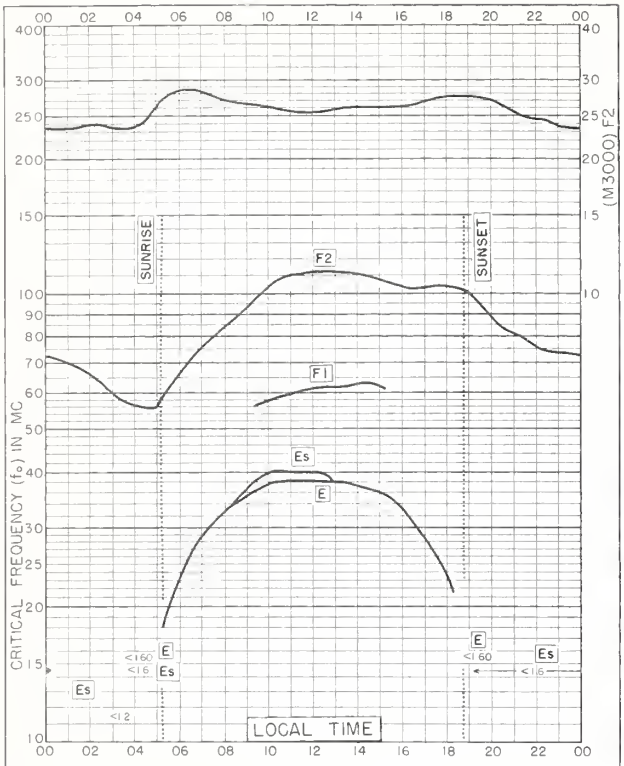


Fig. 101. DOURBES, BELGIUM
50.1°N, 4.6°E APRIL 1958

NBS 503

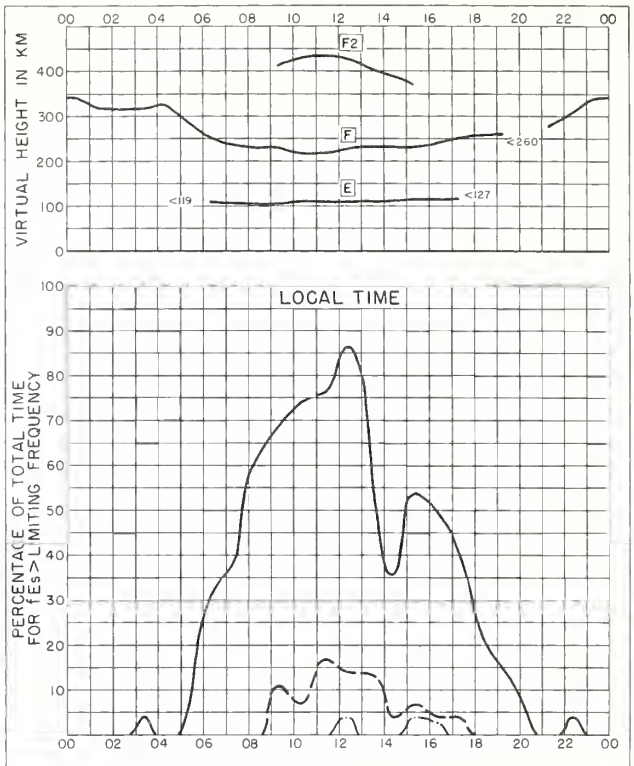


Fig. 102. DOURBES, BELGIUM APRIL 1958

NBS 490

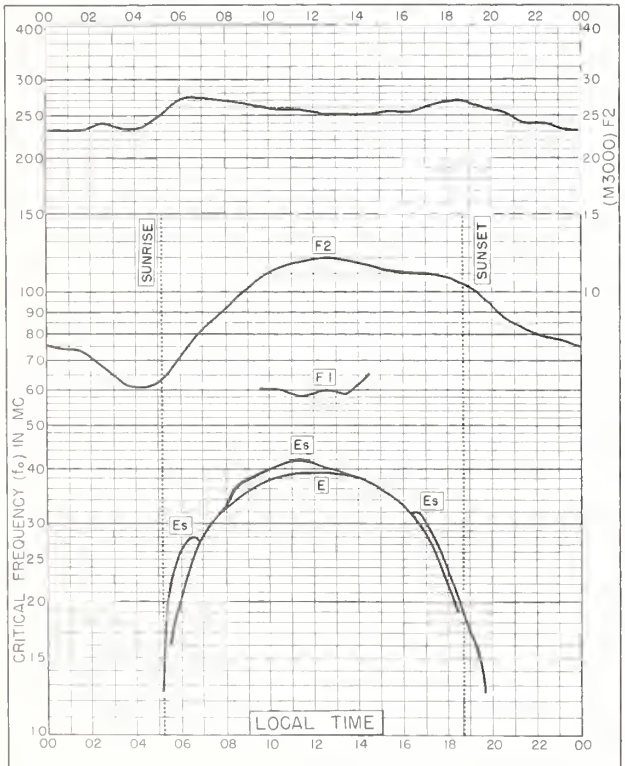


Fig. 103. FREIBURG, GERMANY
48.1°N, 7.6°E APRIL 1958

NBS 503

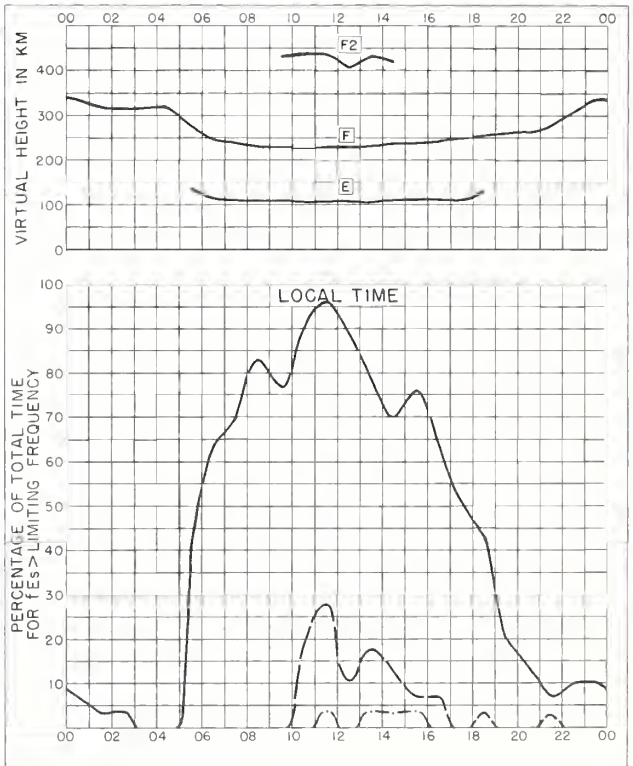


Fig. 104. FREIBURG, GERMANY APRIL 1958

NBS 490

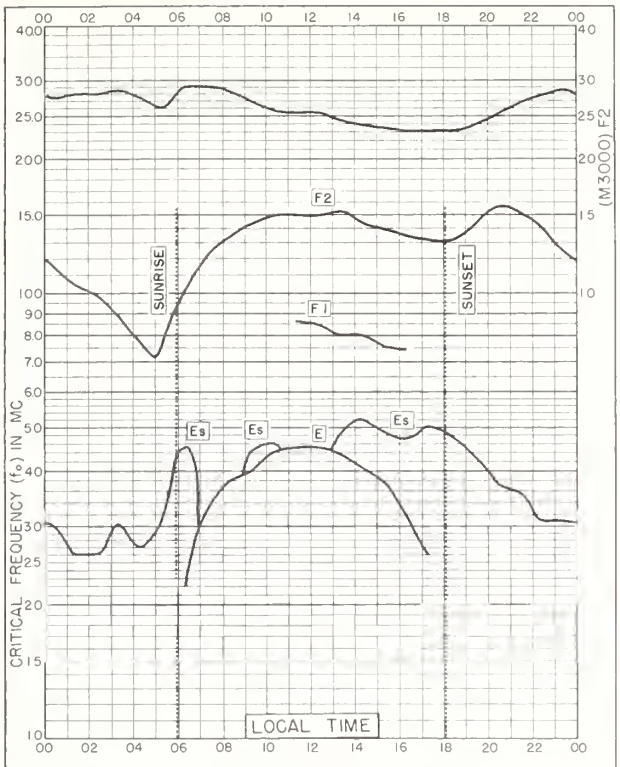


Fig. 105. PARAMARIBO, SURINAM
5.8°N, 55.2°W APRIL 1958

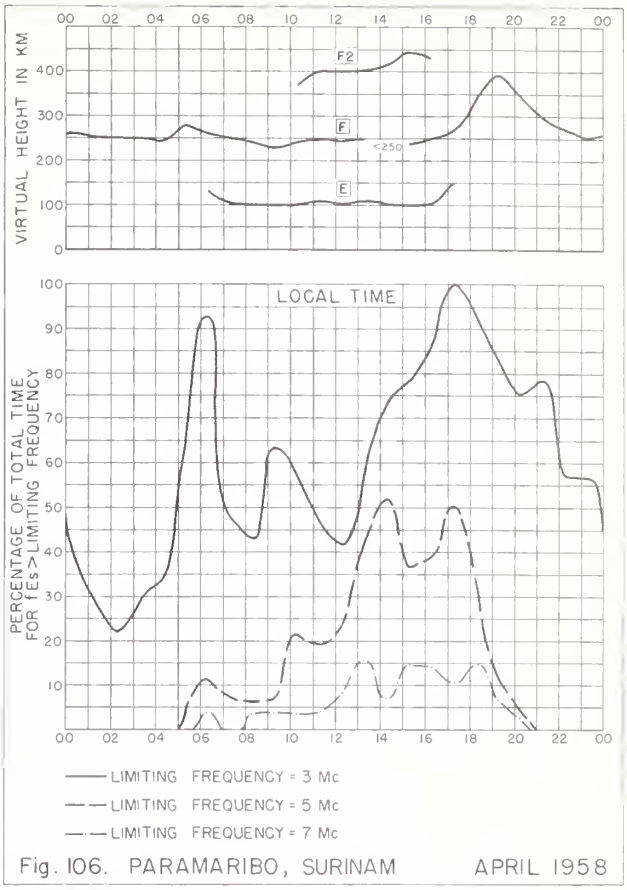


Fig. 106. PARAMARIBO, SURINAM APRIL 1958

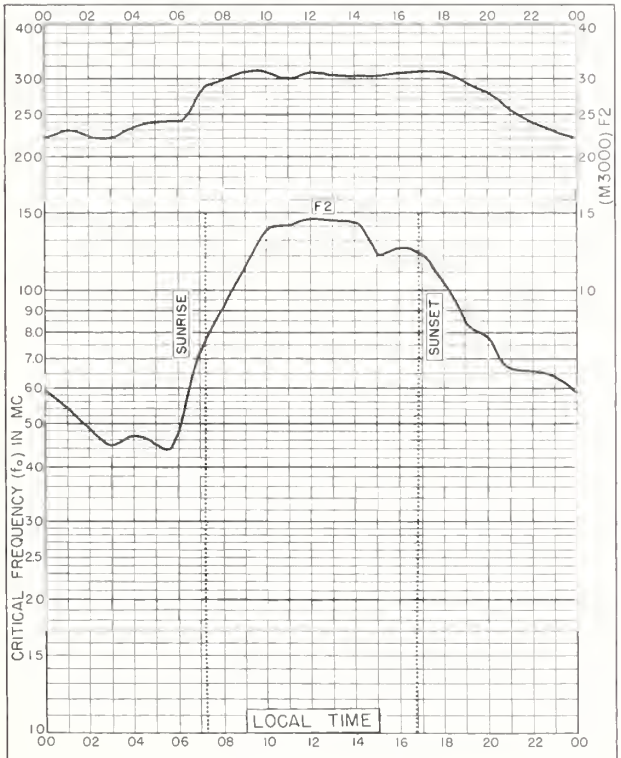


Fig. 107. DECEPCION I.
63.0°S, 60.7°W APRIL 1958

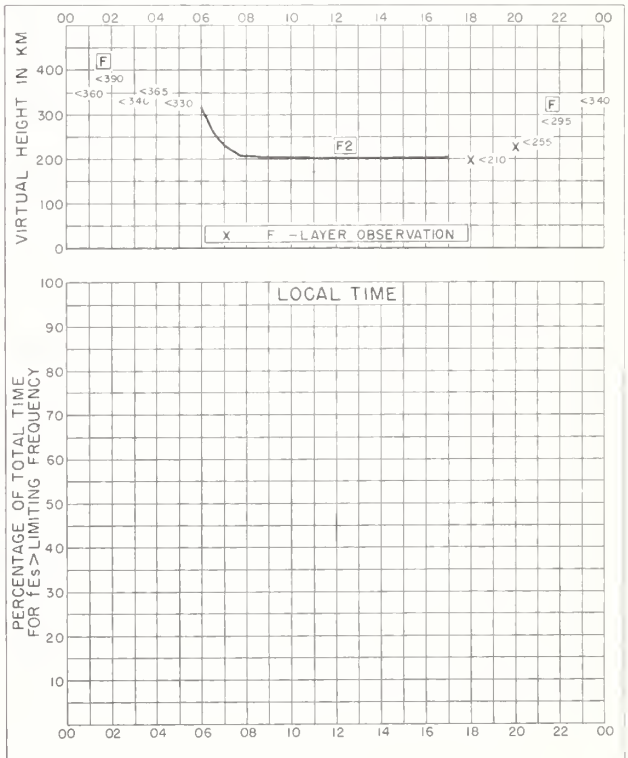


Fig. 108. DECEPCION I. APRIL 1958

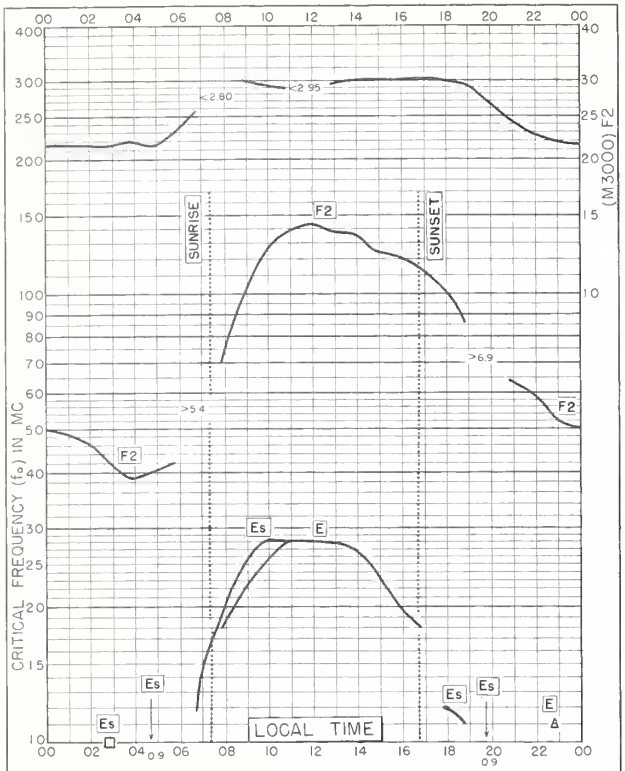


Fig. 109. PORT LOCKROY
64.8°S, 63.5°W APRIL 1958

NBS 503

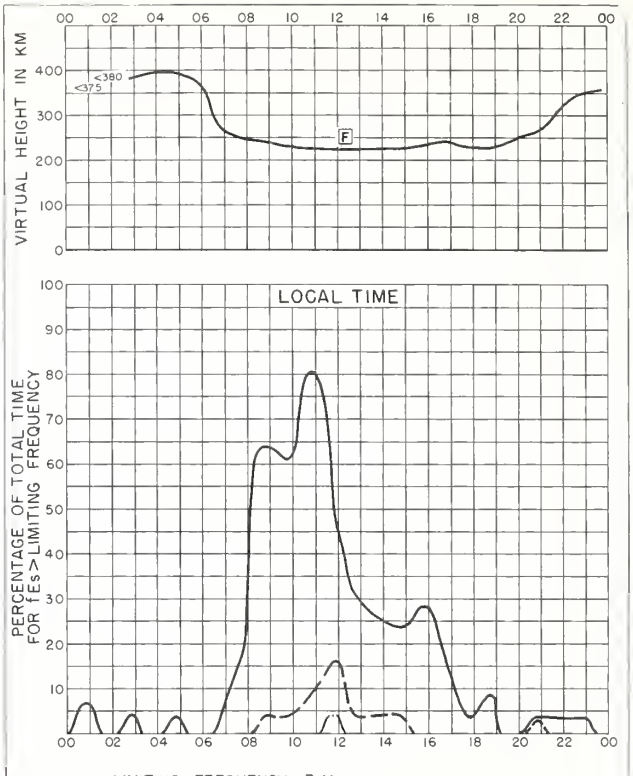


Fig. 110. PORT LOCKROY APRIL 1958

NBS 490

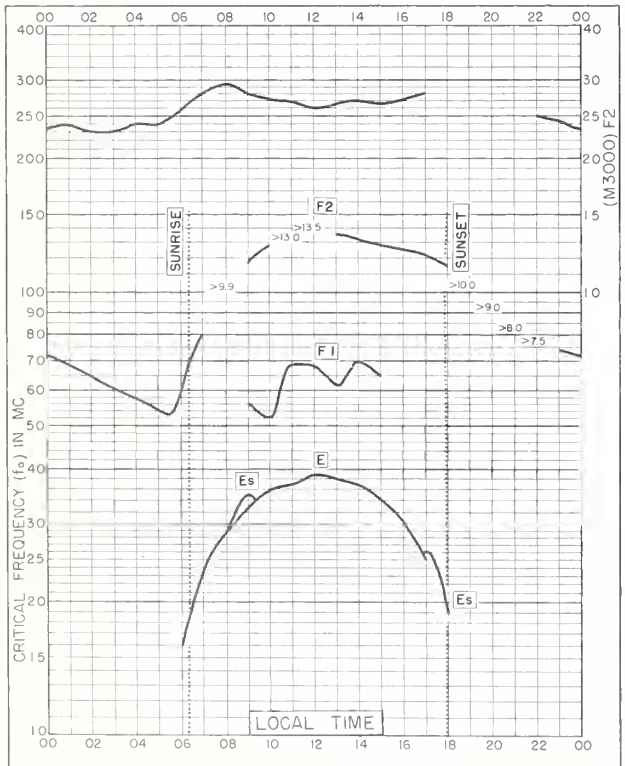


Fig. III. POITIERS, FRANCE
46.6°N, 0.3°E MARCH 1958

NBS 503

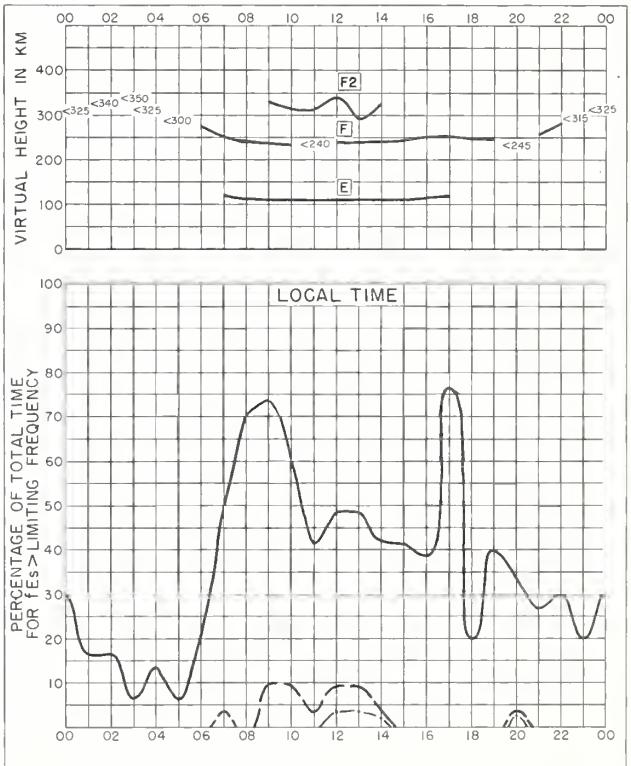


Fig. 112. POITIERS, FRANCE MARCH 1958

NBS 490

Fig. 113. RABAT, MOROCCO
30.9°N, 6.8°W MARCH 1958

NBS 503

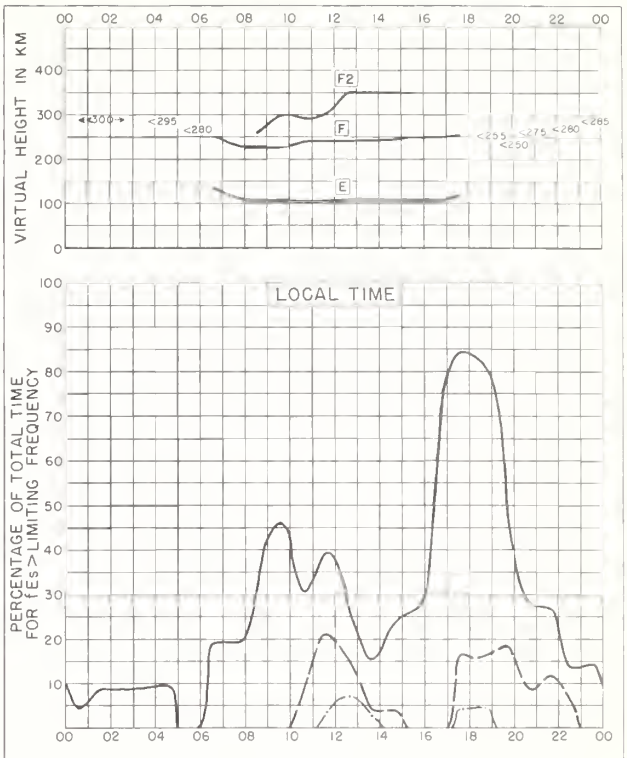


Fig. 114. RABAT, MOROCCO MARCH 1958

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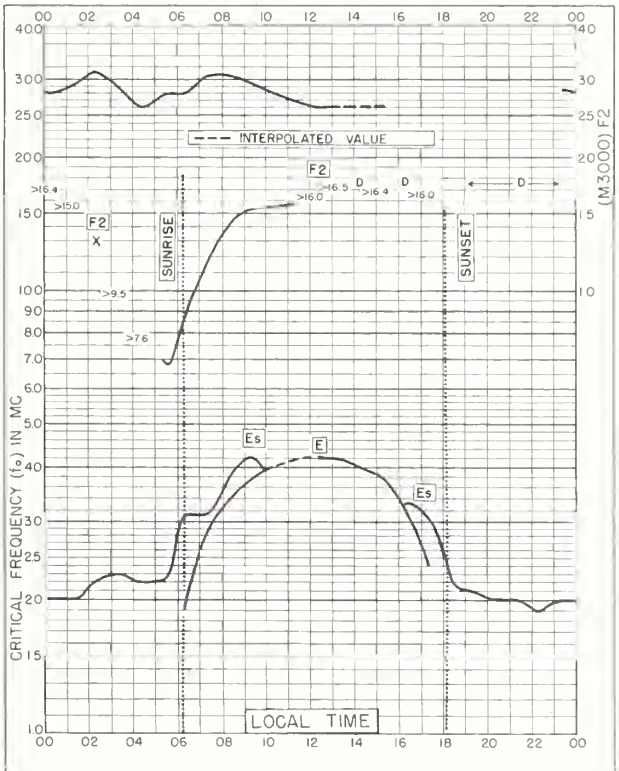

Fig. 115. TAMANRASSET, FRENCH W. AFRICA
22.8°N, 5.5°E MARCH 1958

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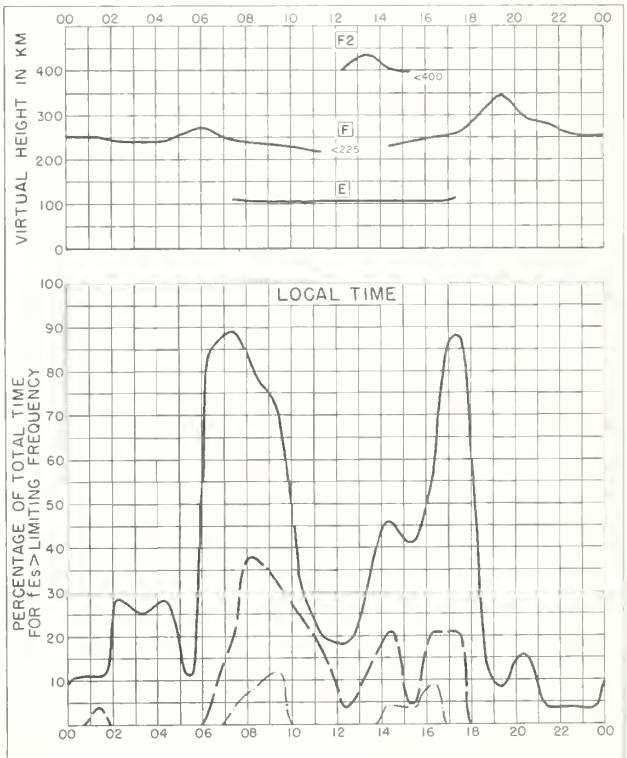

MARCH 1958

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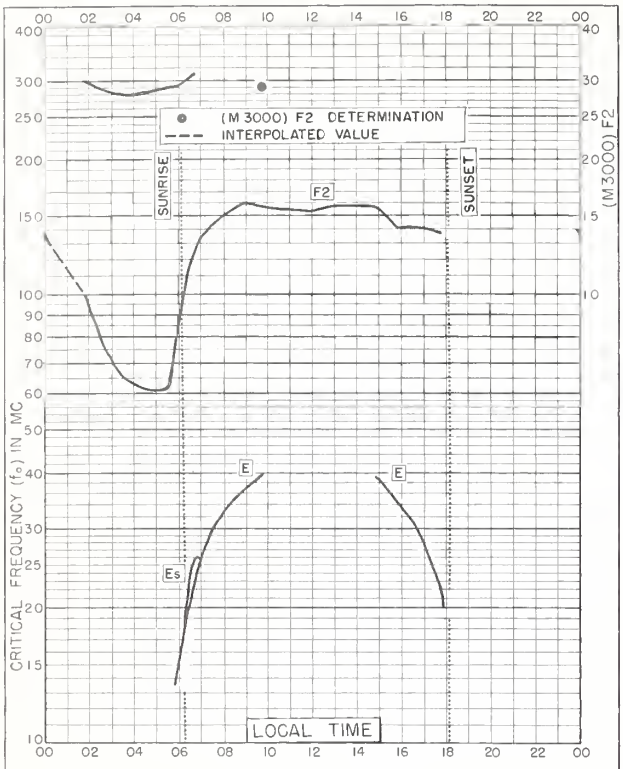

Fig. 117. DAKAR, FRENCH W. AFRICA
14.7°N, 17.4°W MARCH 1958

NBS 503

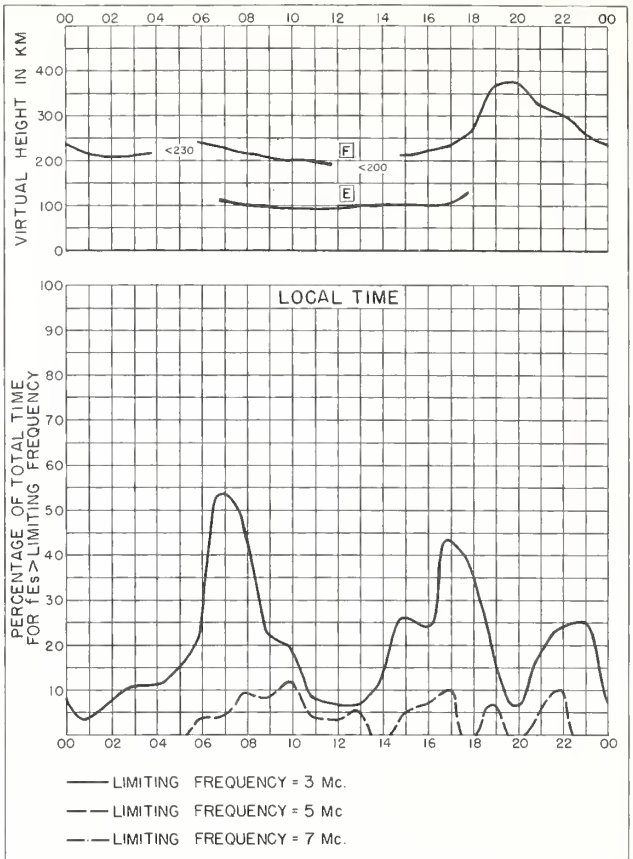

Fig. 118. DAKAR, FRENCH W. AFRICA MARCH 1958

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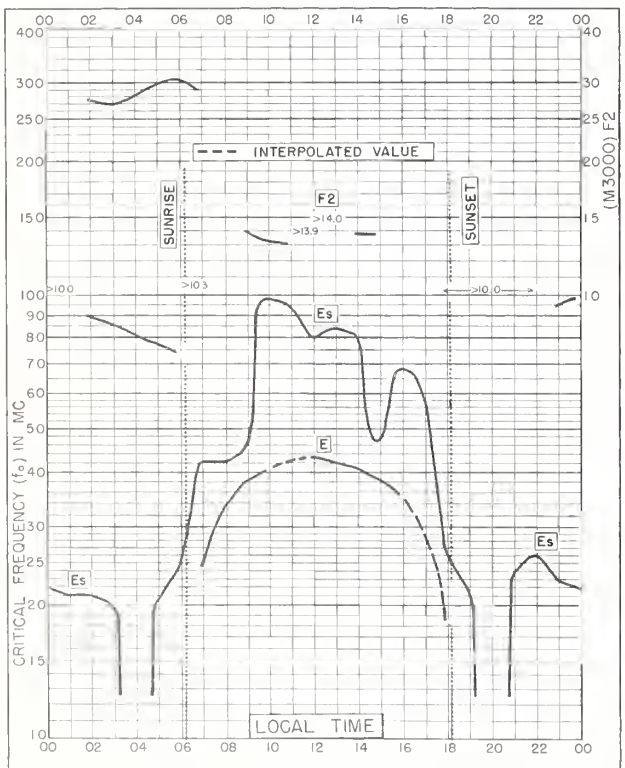

Fig. 119. DJIBOUTI, FRENCH SOMALILAND
11.6°N, 43.2°E MARCH 1958

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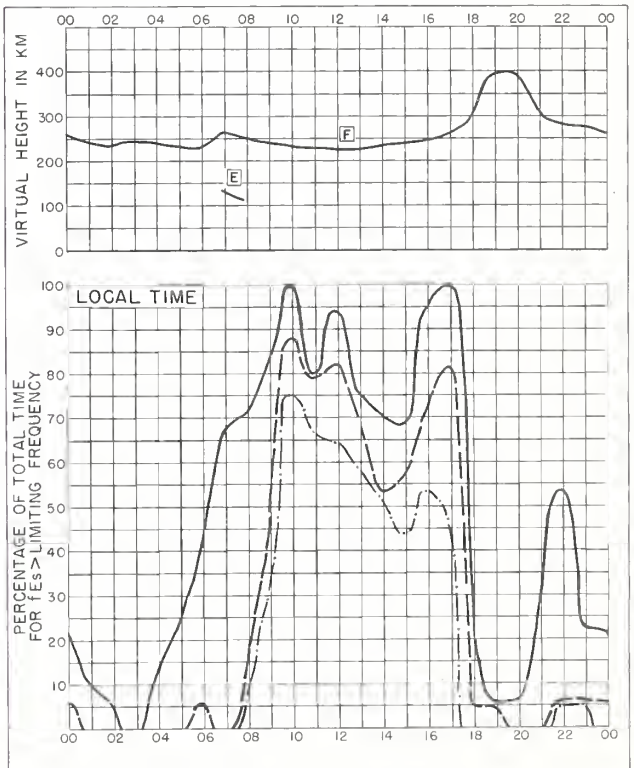

Fig. 120. DJIBOUTI, FRENCH SOMALILAND MARCH 1958

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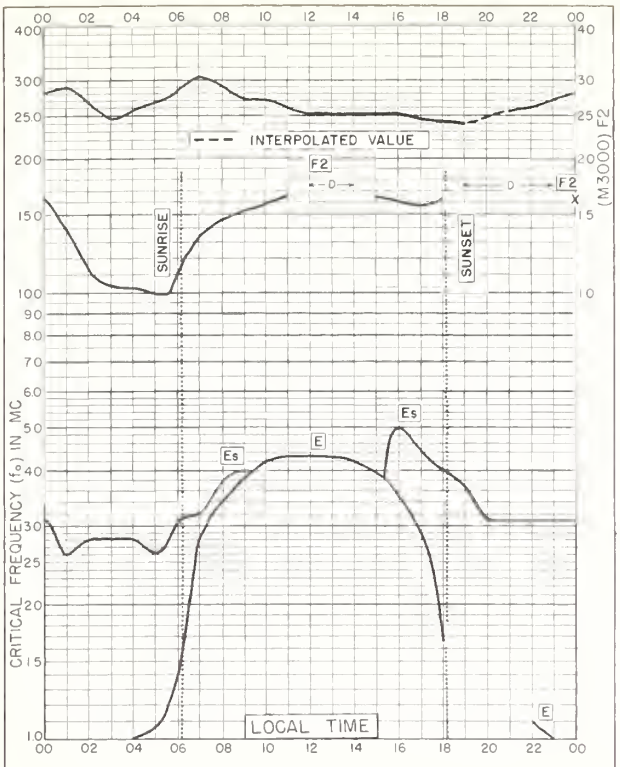

Fig. 121. TAHITI, SOCIETY IS.
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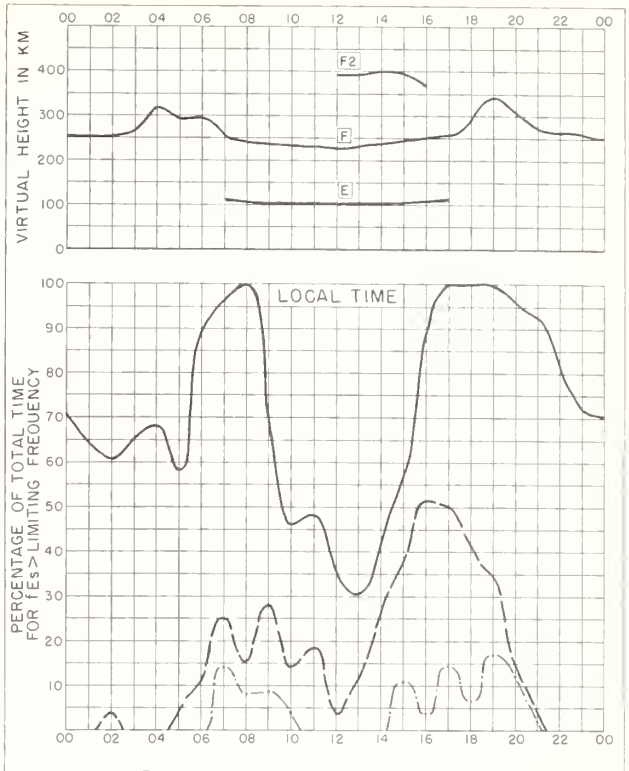

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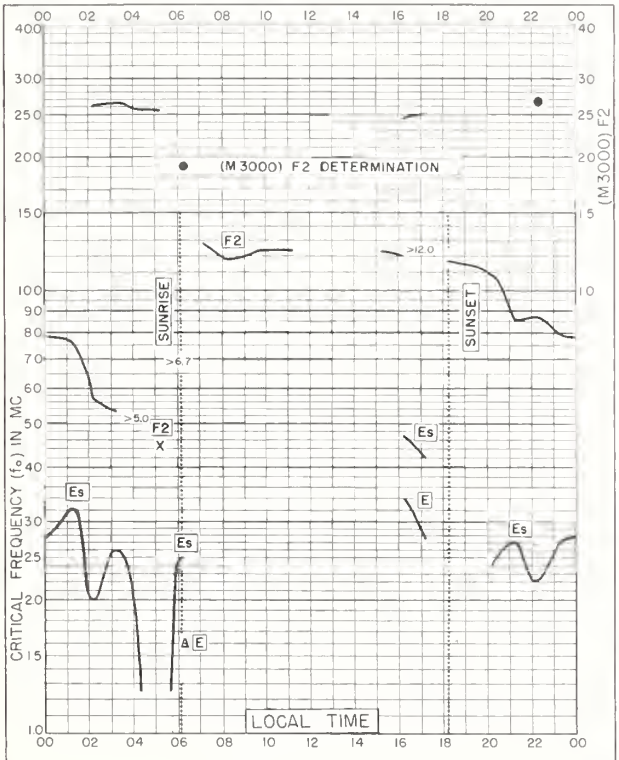

Fig. 123. TANANARIVE, MADAGASCAR
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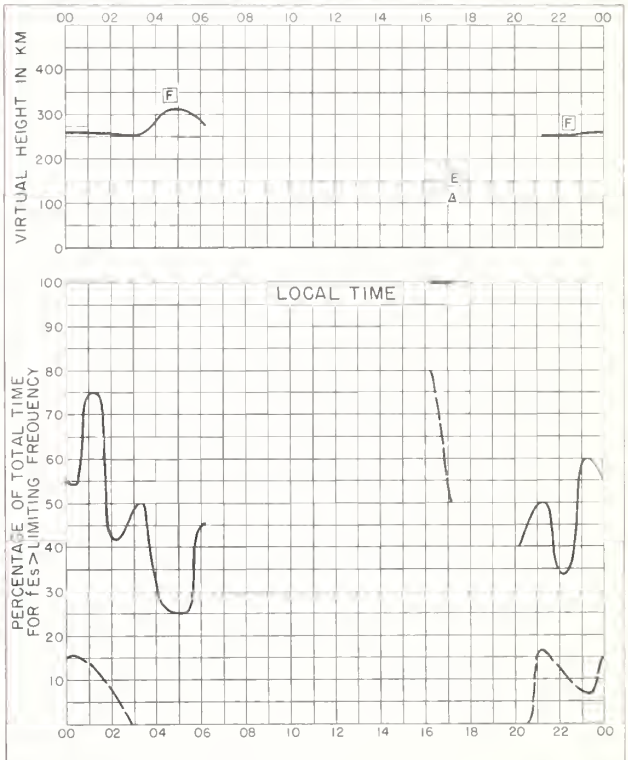

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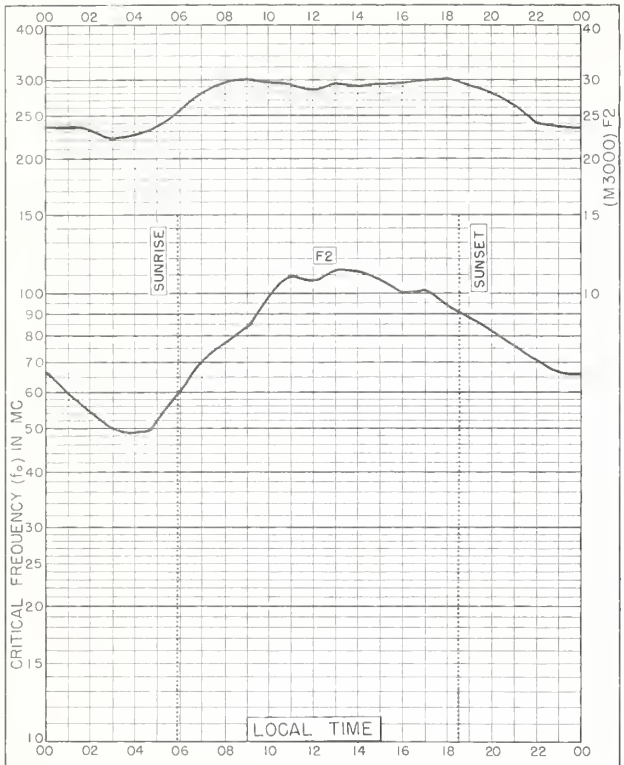

Fig. 125. DECEPCION I.
63.0°S, 60.7°W MARCH 1958

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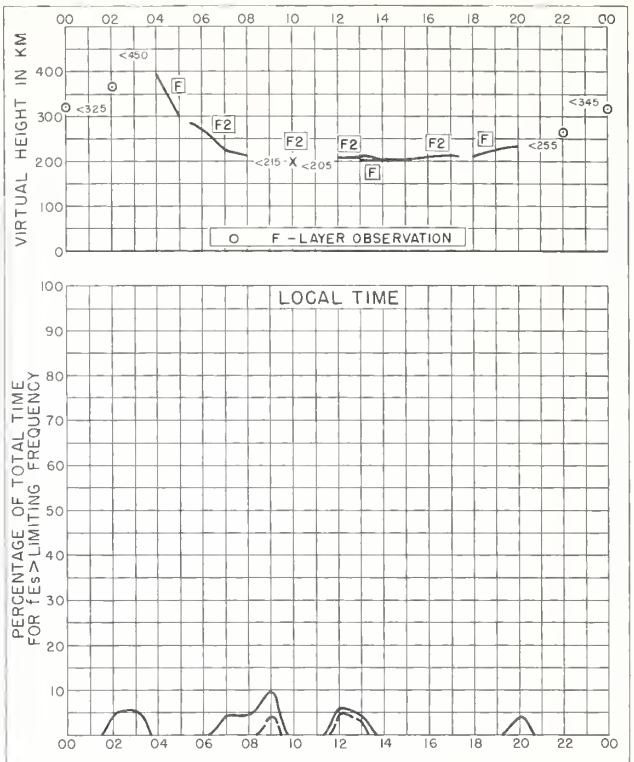

Fig. 126. DECEPCION I. MARCH 1958

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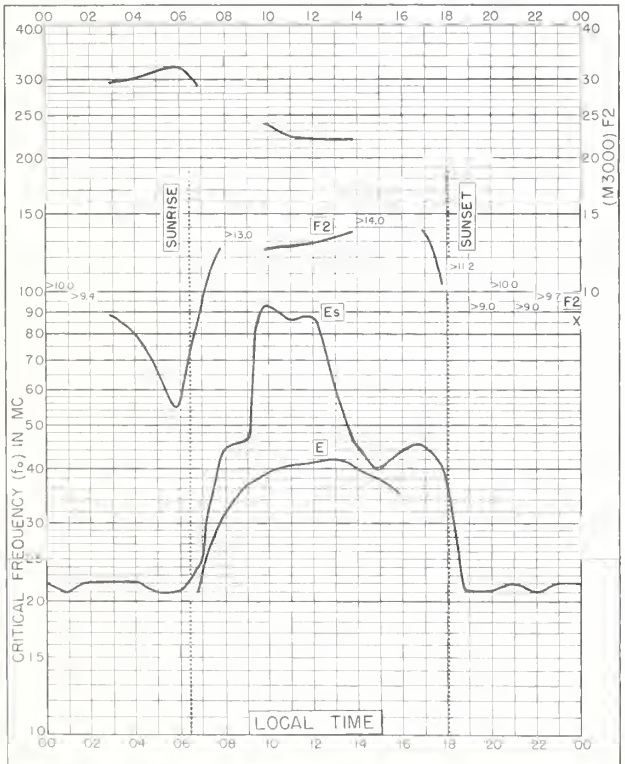

Fig. 127. DJIBOUTI, FRENCH SOMALILAND
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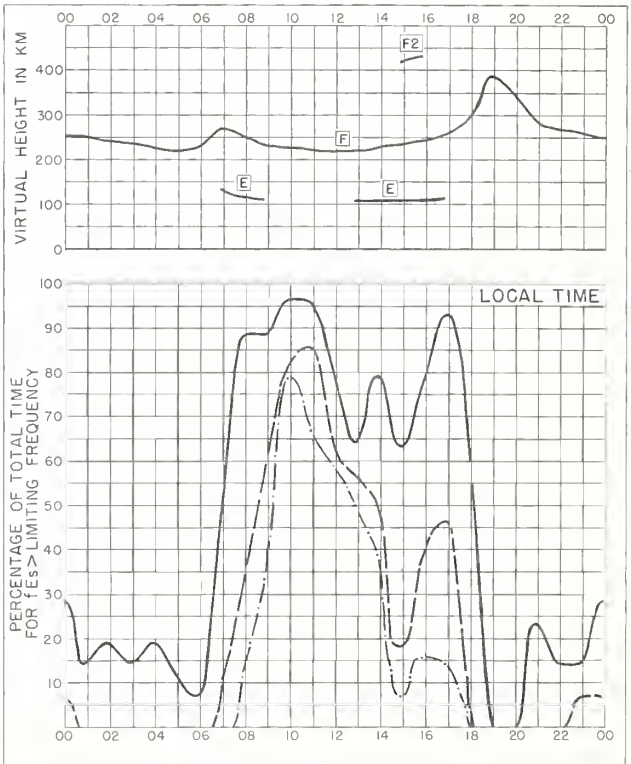

Fig. 128. DJIBOUTI, FRENCH SOMALILAND FEBRUARY 1958

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Fig. 129. TSUMEB, SOUTH W. AFRICA
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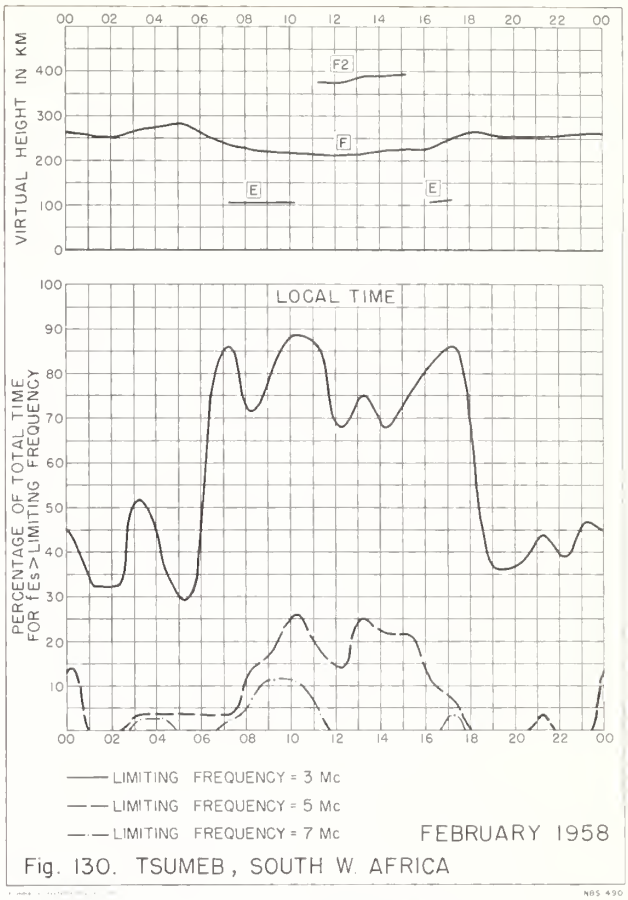
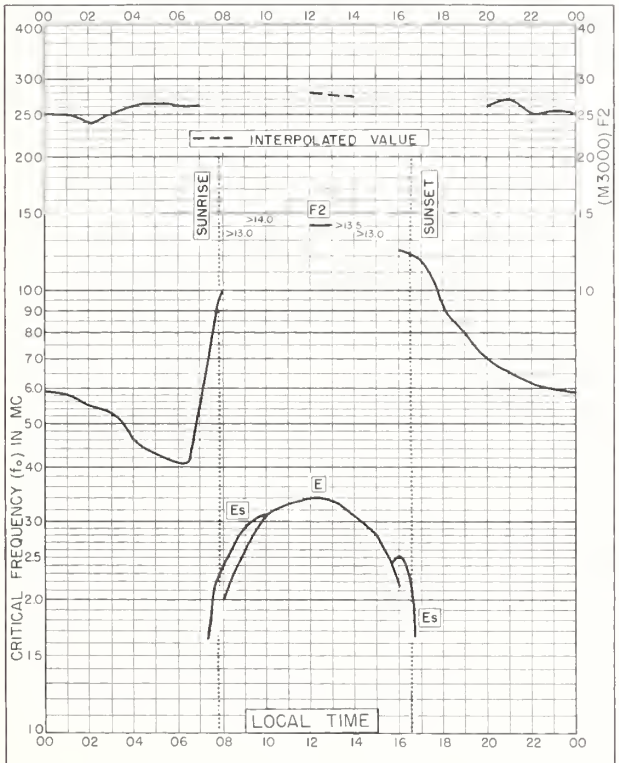


FEBRUARY 1958

Fig. 130. TSUMEB, SOUTH W. AFRICA



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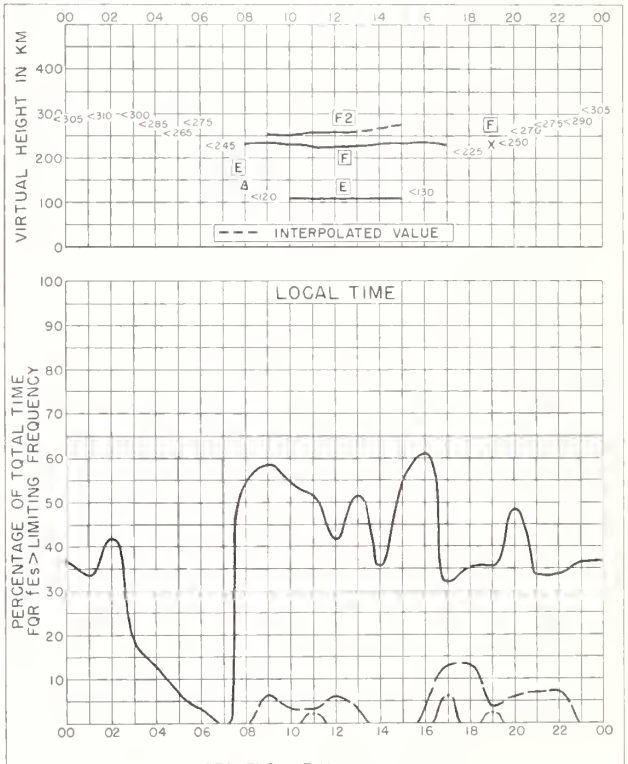

Fig. 132. POITIERS, FRANCE JANUARY 1958

Fig. 133. DAKAR, FRENCH W. AFRICA
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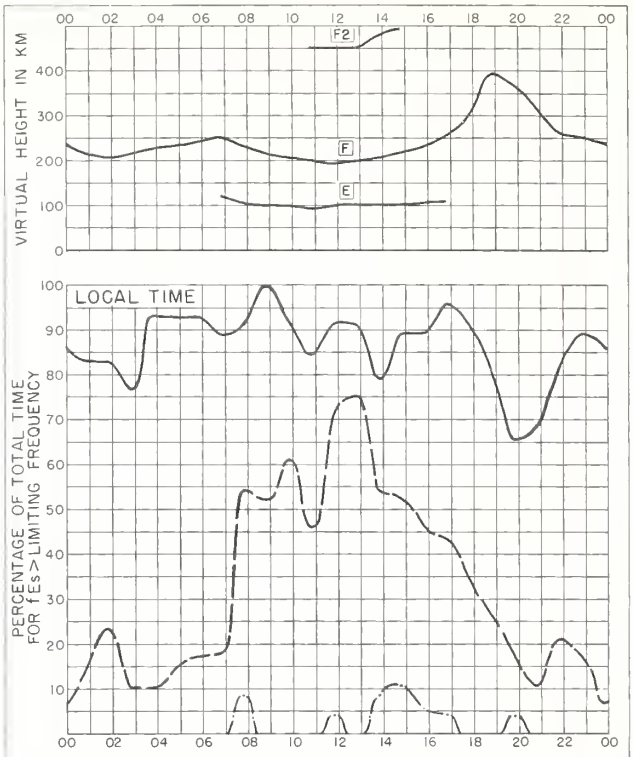

JANUARY 1958

Fig. 134. DAKAR, FRENCH W. AFRICA

NBS 490

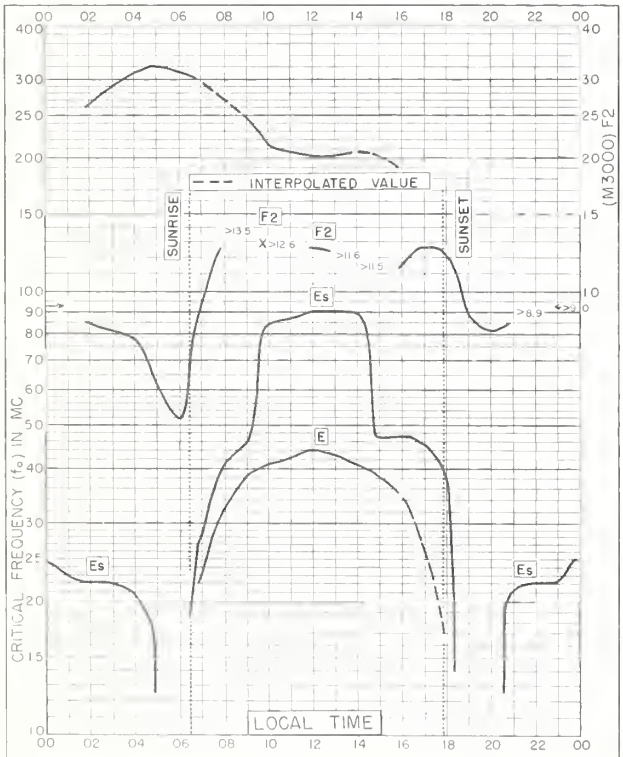

Fig. 135. DJIBOUTI, FRENCH SOMALILAND
11.6°N, 43.2°E JANUARY 1958

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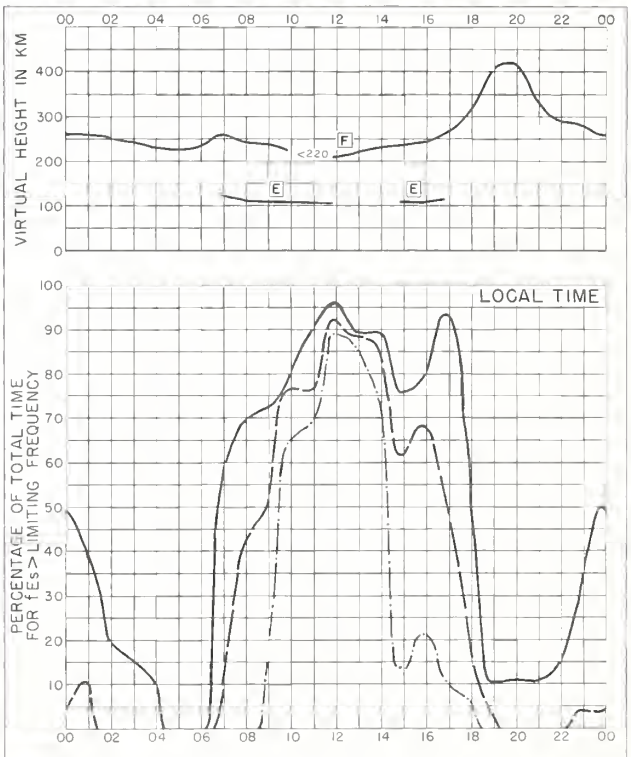

JANUARY 1958

Fig 136. DJIBOUTI, FRENCH SOMALILAND

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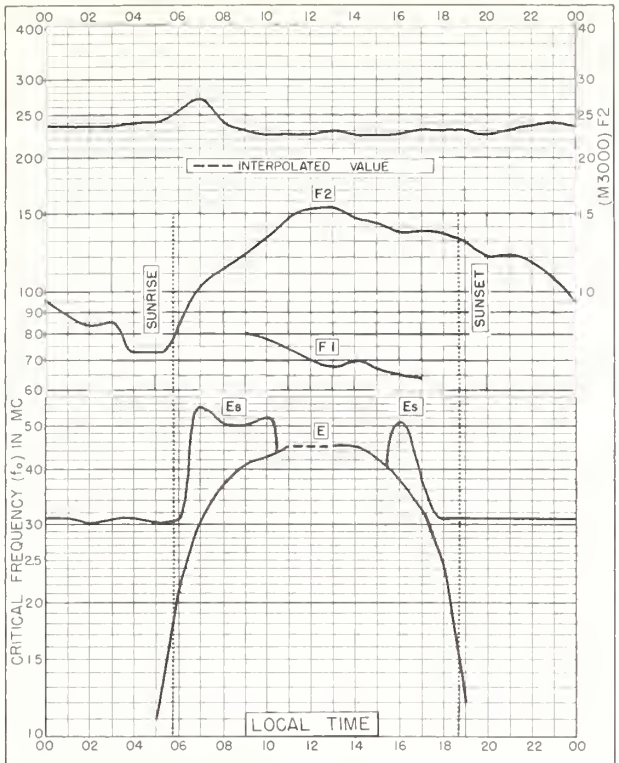

Fig. 137. TAHITI, SOCIETY IS.
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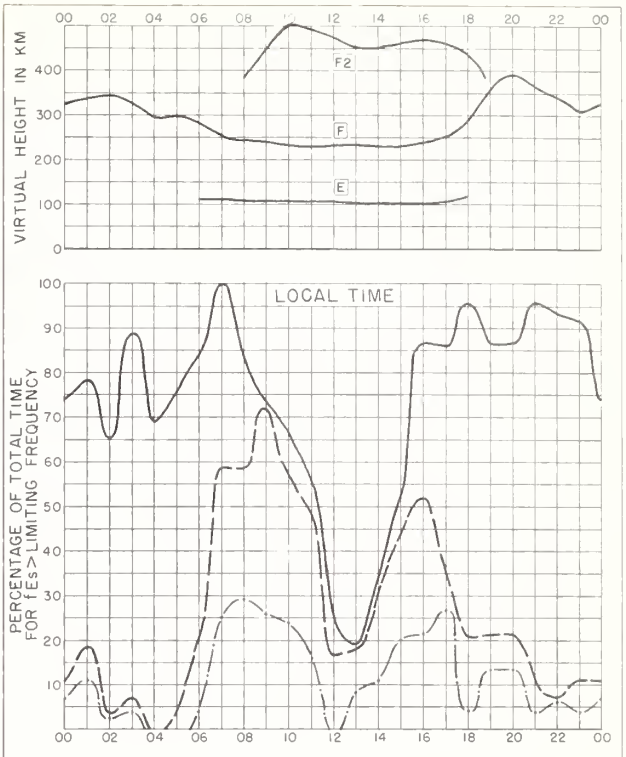

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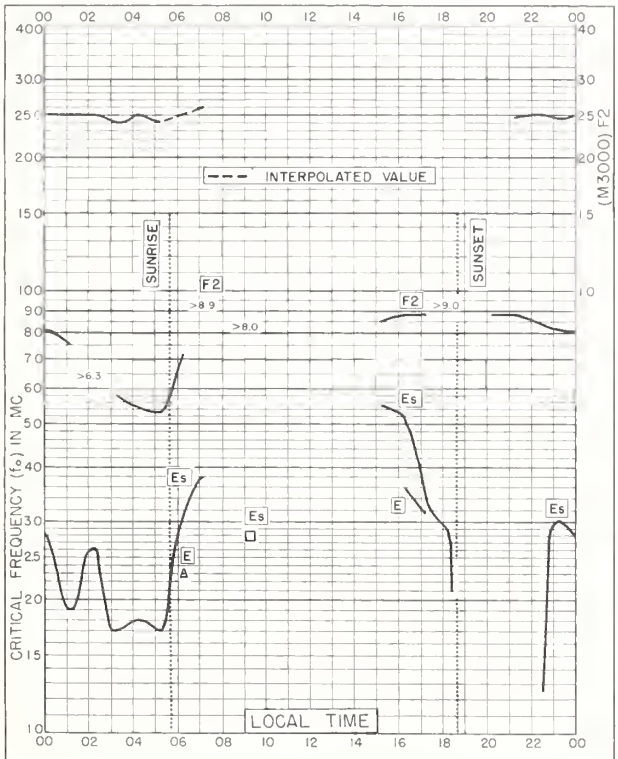

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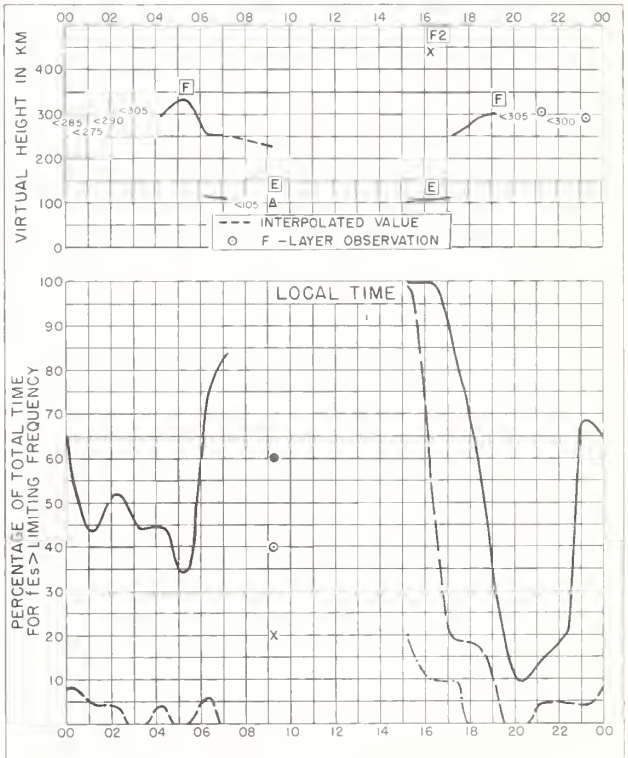

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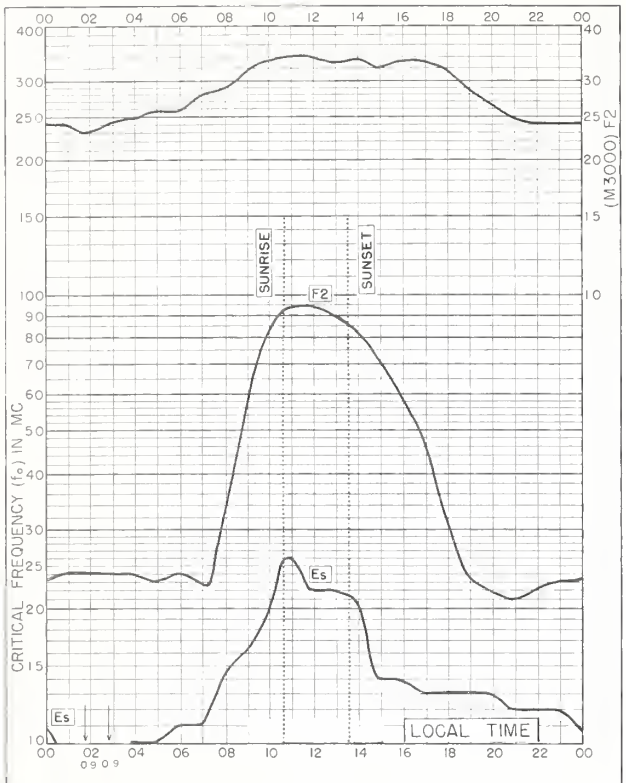

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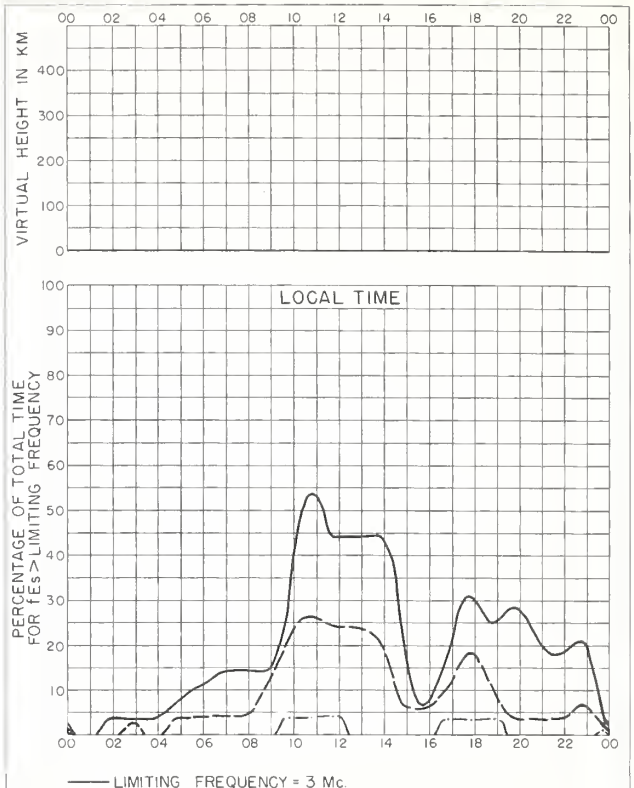

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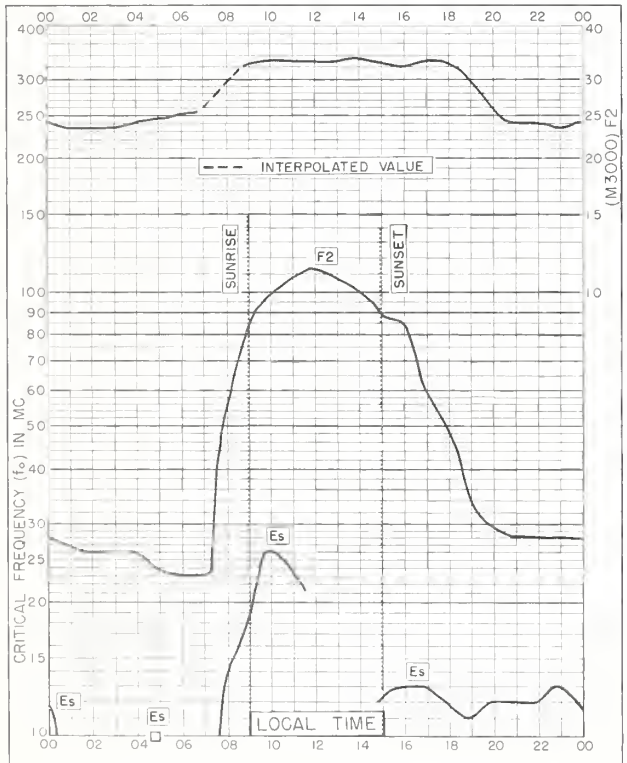

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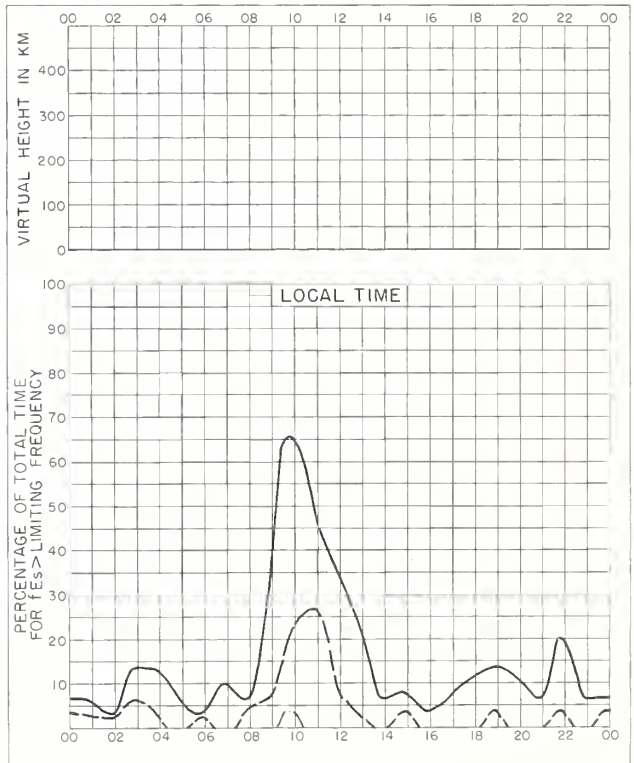

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[A detailed list of CRPL publications is available from the Central Radio Propagation Laboratory upon request]

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CRPL—Jp. North Pacific Radio Propagation Forecast (of days most likely to be disturbed during following month).

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CRPL—F. (Part A). Ionospheric Data.
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Limited distribution. These publications are in general disseminated only to those individuals or scientific organizations which collaborate in the exchange of ionospheric, solar, geomagnetic, or other radio propagation data.

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